A GUIDE BOOK FOR STUDENTS

G. A. DHARMARAJAN

A GUIDE BOOK
FOR
STUDENTS

Edited by

G. A. DHARMARAJAN, M. A. (OXON.)

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PREFACE

This guide book owes its origin to the Vice-Chancellor of the Madras University Sri A. Lakshmanaswamy Mudaliar, M.D., D.SC., F.R.C.O.G., LL.D., F.A.C.S., whose concern that the young people of India must have at least an elementary guide book on the various opportunities available at present for them, was the inspiration for this undertaking. His plan of the book as essentially to be written from the point of view of the student has been followed. His suggestion that the book may classify the opportunities under three stages—namely Matric passed, Intermediate passed and Graduates—has been adopted.

The preparation of the book has been made easier and pleasant by the kind help given by Mr. R. Ravi Varma, M.A., (LONDON), the Registrar of the University of Madras who supervised the preparation of the book with kind suggestions on topics to be included, on the presentation of matter, on the get-up and in various ways to make the book an useful and helpful guide to the young people.

During the compilation of the information contained in this book, several organisations like Provincial and Central Governments, Public Service Commissions, Universities, Professional Institutions, Employment Exchanges, Public and Private Educational Institutions, Companies, Chambers of Commerce, Information Offices of other countries, and editors of papers were contacted. The Co-operation and help given by them are acknowledged with thanks. The help given by heads of departments of the University of Madras and by some research students are also acknowledged.

As stated in the first paragraph, the aim of this modest publication is, to use the Vice-Chancellor's words, "to provide an easy and a comprehensive survey of educational and other opportunities for the young people of India to enable them to choose their further developments". It is hoped that this guide book will to some extent fulfil this purpose.

MADRAS,
JULY, 1953.

G. A. DHARMARAJAN.

PLAN OF THE BOOK AND SYNOPSIS.

This Guide Book for students is divided into three stages for the purpose of convenience of the Students. *Stage One* comprises of the courses, training, careers and other useful information to candidates who have had their education upto Matric or upto standards lower than Matric. *Stage Two* gives the same information to candidates who have studied upto Intermediate examination of the Indian Universities while *Stage Three* gives information on courses, training, services, and other information useful for the graduates.

Under each Stage Chapters are formed for suitable fields like Engineering, Technology and Training, Books of Reference, articles on careers in particular fields, notes on further qualifications, scopes, and illustrative documentary films on training are included as aids to the student to choose his field of study or training. Professional institutes, and institutes of educational interest are also included.

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TRADES

INTRODUCTION

Note to students considering vocational education :—Vocational education and training aims at practical acquiring of skill in different trades. The skilled worker is always in demand and there is not generally much of a fear of unemployment for him. With experience he can establish an independent industry of his own. In choosing the vocation he may consider his family tradition, his interests, and the general scope of the industry he proposes to enter after training. The following books are suggested for his use in arriving at his decision : 'Common commodities and Industries' series by H. E. Bainstead, 'Old trades and new knowledge' by Bragg. During his vocational schooling he may make an early acquaintance with the conditions of the industry of his choosing. For example *the foundry industry* has the following positions for skilled people :—Chippers, Grinders, Hand Core-makers, Machine Core-makers, Floor or Machine Moulders, Bench Moulders, Metal or Wood Pattern Makers, Shakeout men, Hand or Power Truckers. In the *large furniture industry* for example there are the following positions :—case goods assemblers, chairs assemblers, cut-off saw operators, rough stock gluers, maintenance men, machine off bearers, furniture packers, hand rubbers, belt or hand sanders, shaper operators and sprayers.

For example in *Mining and Quarrying* there are positions like Iron stone miners, quarrymen ; In *Iron and Steel Industry* there are positions such as melters, pitmen, slagmen, ladlemen, furnace helpers, gas producer men, iron puddlers, millmen, maintenance craftsmen ; In the *stamped or metal press* there are positions such as polishers, braziers, burnishers, drop stampers and dippers. The youngman can consider these fields and choose the vocation where his skill and interest lies.

Some of the Govt. of India's documentary films on Industries are also useful to find out one's interest and scope in the fields. For example the documentary 'Iron Horse' illustrates the locomotive industry in India. The series 'Industrial Mysore' highlights the sugar mills, gold fields, and the textile mills and their work. The student may note such of the fields which attract him. The series 'Madhya Bharat' highlights the cottage industries of that State.

TRAINING COURSES OFFERED BY THE EMPLOYMENT EXCHANGES

Students, after a good school education, may consider acquiring necessary skill which are required in careers in industry. They can well benefit by the technical training scheme operated by the Govt. of India through the employment exchanges. The object of the scheme is to ensure a supply of skilled workers, and to reduce unemployment amongst educated young men by equipping them for suitable industrial employment.

Scope and duration: (1) A two year course of technical training in engineering and building trades. (2) vocational training in cottage and small scale industries extending for a year. A list of trades appears below. Age limits are between 18 and 25. Candidates will be selected through a committee set up for this purpose. There will be a final examination leading to a Govt. diploma on the subject. There are no tuition fees. About fifty percent of pupils will get monthly stipends. There are also other amenities like free medical treatment and free workshop clothing. After completion of training, successful candidates will be helped to be placed in industries in suitable trades. Applications must be submitted to the nearest employment exchange who will supply further details.

LIST OF TRADES

Technical: Blacksmith, Building constructor, Carpenter and Joiner, Concretor, Draughtsman, Mill Wright, Electrician, Electroplator, Grinder, Lineman, Machinist, Mason, Mechanics, Moulder, Sub Overseer, Painter, Patternmaker, Plumber, Radio Servicing & Repair, Signaller, Surveyor, Trimmer, Turner, Watch Repairer, Welder, Wireless Operator.

Vocational: Textile :—Bleaching, dyeing, printing, carpet and drugget weaving; Handweaving of fancy and furnishing fabrics; knitting with hand and machines; weaving of sari borders, ribbons, gota.

Metal: Manufacture of domestic utensils.

Wood-working: Basketry and willow work (including cane, bamboo and reed furniture) Toy making, Musical instruments making, Sports goods manufacture, brushware manufacture.

Leather: Footwear, suitcase, tanning, dyeing, sports goods.

Ceramic: Manufacture and glazing of earthernware, crayons, chalk-sticks, blanco, glass beads.

Printing: Book binding, Hand composition, Printing machine operation, Proof reading.

Miscellaneous : Cutting and tailoring, papier mache work, preservation of fruits and vegetables, making of jams, jellies, syrups, pickles, condiments etc.

The minimum educational qualification for the technical and vocational training courses mentioned is normally III or IV Form but for courses such as Draughtsman, Surveyor, Radio mechanic and instrument mechanic, a standard upto S.S.L.C. is required. These qualifications will, however, be relaxed if the applicants have additional qualifications. Interested candidate may get a copy of the prospectus for Technical and Vocational training scheme from Asst. Director (Training), Haddows Road, Madras-6.

The following are the Regional, sub-regional and District Employment Exchanges where the candidates may apply for consideration for this training.

Ranga Vilas, Opposite Police Recruits School, Anantapur;
Balaji Rao's Buildings, Krishnamachari Road, Bellary;
No. 3/330 Bhujanga Rao St., Cuddapah;
Narasinha Raopetam, Kurnool;
Suryaraopeta, Buckinghampet P.O. Dr. Ramachandra Rao's St., Vijayawada.
Elluru; D.S.S. and A.B. Buildings, Guntur;
7/897 Market St., Fort, Salem;
Tamil Sangam Road, Madurai;
Ex-Servicemen Centre, Palamcottah;
Collector's Office, Nellore; Kakinada;
D.S.S. and A.B. Ex-serviceman Centre buildings, Vellore;
166-A, Mount Road, Madras;
Victory House, Chittoor;
Dinboy House, Kozhikode: Mangalore;
Fort, Mercara, Coorg;
13-A Williams Road, Cantonment, Trichy;
Sub-Jail Road, Cuddalore;
3, Lady Curzon Road, Bangalore;
Puthan Chanthai, Trivandrum;
Alandur Road, Madras 15;
Sandy Cotes Maharanipeta, P.O. Vizag;
The Collectorate, Ootacamund;
Banerji Road, Ernakulam;
Malampuzha Project, Punnapara, Palghat;
9, Yelaul Road, Mysore;

Technical & Vocational Training of Adult Civilians
List of Technical Trades in which Training is available in the Region.

ASSAM

1. Blacksmith
2. Building Constructor
3. Carpenter
4. Electrician and Armature Winder
5. Machinist
6. Mechanic (Motor)
7. Mechanic (I.C. Engine)
8. Mechanic (General)
9. Moulder
10. Pattern Maker
11. Turner
12. Welder (Elec. & Gas)

BIHAR

1. Blacksmith
2. Carpenter
3. Draughtsman (Mech.)
4. Draughtsman (Civil)
5. Electrician & Armature Winder
6. Lineman & Wireman
7. Machinist
8. Mechanic (Motor)
9. Radio Servicing
10. Mechanic (General)
11. Millwright
12. Moulder
13. Surveyor
14. Turner
15. Welder (Elec. & Gas)
16. Sheet Metal Worker

BOMBAY

1. Blacksmith
2. Carpenter
3. Draughtsman (Mech.)
4. Draughtsman (Civil.)
5. Electrician & Armature Winder.
6. Lineman & Wireman
7. Machinist
8. Mechanic (Motor)
9. Mechanic (Dom. Ref.)
10. Mechanic (General)
11. Mechanic (I.C. Engine)
12. Radio Servicing
13. Moulder
14. Painter
15. Pattern Maker
16. Surveyor
17. Trimmer
18. Turner
19. Welder (Elec. & Gas)
20. Wireless Operator
21. Clock & Watch Repairer
22. Sheet Metal Worker

DELHI

1. Blacksmith
2. Carpenter
3. Draughtsman (Mech.)
4. Draughtsman (Civil)
5. Electrician & Armature Winder
6. Machinist
7. Mechanic (Motor)
8. Radio servicing
9. Mechanic (General)
10. Moulder
11. Painter
12. Pattern Maker
13. Plumber
14. Surveyor
15. Turner
16. Welder (Elec. & Gas)
17. Sheet Metal Worker
18. Lineman & Wireman
19. Mechanic (Instrument)

MADHYA PRADESH

1. Blacksmith
2. Building Constructor
3. Carpenter
4. Draughtsman (Mech.)
5. Electrician and Armature Winder
6. Machinist
7. Mechanic (Motor)
8. Mechanic (I.C. Engine)
9. Mechanic (General)
10. Moulder
11. Pattern Maker
12. Radio Servicing
13. Turner
14. Sheet Metal Work
15. Overseer
16. Welder (Elec. & Gas)

MADRAS

1. Blacksmith
2. Building Constructor
3. Carpenter
4. Draughtsman (Mech.)
5. Draughtsman (Civil)
6. Electrician & Armature Winder
7. Electroplater
8. Lineman & Wireman
9. Machinist
10. Mechanic (Instrument)
11. Mechanic (Motor)
12. Mechanic (I.C. Engine)
13. Mechanic (General)
14. Moulder
15. Pattern Maker
16. Painter
17. Plumber
18. Sheet Metal Worker
19. Turner
20. Surveyor
21. Clock & Watch Repairer
22. Radio Servicing
23. Welder (Elec. & Gas)

ORISSA

1. Blacksmith
2. Carpenter
3. Electrician and Armature Winder
4. Machinist
5. Mechanic (Motor)
6. Mechanic (I.C. Engine)
7. Mechanic (General)
8. Plumber
9. Turner
10. Welder (Elec. & Gas)

PUNJAB

1. Blacksmith
2. Building Constructor
3. Carpenter
4. Draughtsman (Mech.)
5. Draughtsman (Civil)
6. Electrician & Armature Winder
7. Electroplater
8. Lineman & Wireman
9. Machinist
10. Mechanic (Instrument)
11. Mechanic (Motor)
12. Mechanic (General)
13. Moulder
14. Painter
15. Plumber
16. Radio Servicing
17. Sheet Metal Worker
18. Turner
19. Pattern Maker
20. Welder (Elec. & Gas)
21. Clock & Watch Repairer
22. Surveyor
23. Overseer

UTTAR PRADESH

1. Blacksmith
2. Building Constructor
3. Carpenter
4. Draughtsman (Mech.)
5. Electrician & Armature Winder
6. Electroplater
7. Lineman & Wireman
8. Machinist
9. Mechanic (Motor)
10. Mechanic (Dom. Ref.)
11. Mechanic (I.C. Engine)
12. Mechanic (General)
13. Moulder
14. Mechanic Tractor
15. Painter
16. Pattern Maker
17. Plumber
18. Radio Servicing
19. Sheet Metal Worker
20. Tool Maker
21. Trimmer
22. Turner
23. Welder (Elec. & Gas)
24. Wireless Operator
25. Overseer
26. Clock & Watch Repairer

WEST BENGAL

1. Blacksmith
2. Building Constructor
3. Carpenter
4. Draughtsman (Mech.)
5. Draughtsman (Civil)
6. Electrician and Armature Winder
7. Lineman and Wireman
8. Grinder
9. Machinist
10. Mechanic (Instrument)
11. Mechanic (Motor)
12. Mechanic (Dom. Ref.)
13. Mechanic (I. C. Engine)
14. Mechanic (General)
15. Moulder
16. Overseer
17. Painter
18. Pattern Maker
19. Plumber
20. Radio Servicing
21. Sheet Metal Worker
22. Surveyor
23. Turner
24. Welder (Elec. & Gas)

LIST OF TRAINING INSTITUTIONS/CENTRES

Assam

Industrial Training Institute, Jorhat.

Bihar

1. Industrial Training Institute, Digha, Patna.
2. Industrial Training Centre, Government Technical School, Ranchi.
3. Industrial Training Centre, Bhartiya Engineering Works, Sahibganj.

Bombay

1. Industrial Training Institute, Bombay.
2. Industrial Training Institute, Aundh, Poona.
3. Industrial Training Centre, Nowrosji Wadia College, Poona.
4. Industrial Training Centre, Shivaji Technical Institute, Kolhapur.
5. Industrial Training Centre, B. V. Bhoomreddy College of Engineering and Technology, Hubli.

Delhi

1. Industrial Training Centre, Delhi Polytechnic, Delhi.
2. Industrial Training Institute, Karolbagh, Delhi.
3. Industrial Training Centre, State Water Works, Jaipur.
4. Industrial Training Institute, Ajmer.
5. Industrial Training Institute, Bela Road, Delhi.
6. Industrial Training Institute for Women, Delhi.

Madhya Pradesh

Industrial Training Centre, Koni, Bilaspur.

Punjab

1. Industrial Training Institute, Rohtak.
2. Industrial Training Institute, Ferozepore.
3. Industrial Training Centre, Dayanand Industrial School, Jullundur.
4. Industrial Training Centre, Dayanand Polytechnic, Amritsar.
5. Industrial Training Centre, Dayanand Industrial School, Ambala City.
6. Industrial Training Centre, Silver Jubilee Technical Institute, Mandi, (Himachal Pradesh).
7. Industrial Training Centre, Polytechnic Institute, Phagwara (PEPSU)

Madras

1. Industrial Training Institute, Anantapur, Madras.
2. Industrial Training Centre, Polytechnic, Vuyyuru (Kistna Dist.)
3. Industrial Training Institute, Kakinada (East Godavari Dist.)
4. Industrial Training Institute, Madras.
5. Industrial Training Centre for Women, Andhra Mahila Sabha Trust Board, Mylapore, Madras.
6. Industrial Training Centre, Central Polytechnic, Madras.
7. Industrial Training Centre, Strathie Co-operative Engineering Workshops, Madras.
8. Industrial Training Centre, Tamil Nad Polytechnic, Madura.
9. Industrial Training Centre, Sir Arthur Hope Polytechnic, Coimbatore.
10. Industrial Training Centre, Karnataka Polytechnic, Mangalore.
11. Industrial Training Institute, Jalahalli, Bangalore (Mysore).
12. Industrial Training Centre, College of Engineering, Trivandrum (Travancore-Cochin).
13. Industrial Training Centre, Pioneer Motor Service, Nagercoil (Travancore-Cochin).
14. Industrial Training Centre, Government School of Arts, Trivandrum (Travancore-Cochin).
15. Industrial Training Centre, Maharajah's Technological Institute, Trichur (Travancore-Cochin).
16. Industrial Training Institute, Virajpet, Coorg (Mercara).
17. Industrial Training Centre for Women, Madras.
18. Industrial Training Centre, Sri Jayachamarajendra Occupational Institute, Bangalore (Mysore).
19. Industrial Training Centre, Bangalore Transport Company, Bangalore (Mysore).

Orissa

1. Industrial Training Centre, Orissa School of Engineering, Cuttack.
2. Industrial Training Centre, Orissa Poor Cottage Industry, Cuttack.

Uttar Pradesh

1. Industrial Training Centre, Government Technical Institute, Lucknow.
2. Industrial Training Institute, Meerut.
3. Industrial Training Centre, Engineering College, Banaras Hindu University, Banaras.
4. Industrial Training Institute, Alambagh, Lucknow.
5. Industrial Training Institute, Almora.
6. Industrial Training Centre, Kumaon Polytechnic, Ranibagh, Kathgodam.
7. Industrial Training Institute for Women, Dehra Dun.
8. Industrial Training Institute, Rampur.
9. Industrial Training Institute, Aligarh.

West Bengal

1. Industrial Training Institute, Tollygunj.
2. Industrial Training Centre, George Telegraphs Institute, Calcutta.
3. Industrial Training Institute, Gariabata, Calcutta.
4. Industrial Training Centre, Calcutta Technical School, Calcutta.
5. Industrial Training Centre, Howrah Homes, Santragache, Howrah.
6. Industrial Training Centre, College of Engineering and Technology, Jadavpur.
7. Industrial Training Centre, B. P. Chowdhury Technical School, Krishanagar.
8. Industrial Centre, St. Alphonsius Industrial School, Kurseong.

Instrument Mechanics :

The following is the Institute on this subject.

Sri J. Occupational Institute, Bangalore—3 years—Diploma.

SCOPE

Machine Tools Factories such as one at Harihar, Mysore State. Watch companies ; Instrument making companies.

Plumbing and Sanitary Fitting :

Sri J. Occupational Institute, Bangalore—3 years—Diploma.

SCOPE

Municipalities, Hospitals, Schools, Houses.

Boilers and Engines :

Sri J. Occupational Institute—3 years—Diploma.

SCOPE

Railways, Workshops, Factories, Electricity Departments.

Machine Tool Technology :

Occupational Institute, Hassan - 3 years - Diploma.

SCOPE

Machine Tools Factories like the one at Harihar, Mysore State.

Trained Mechanic - Diploma :

This course is available at the Govt. Technical Institute, Ambala. The branches are :— Mechanical Draughtsman, pattern makers and Founders, Mechanists, Fitters and Erecters and Automobile repairs. The duration is 4 years.

Iron Smithy :

Designs executions in wrought and cast iron, turning and fitting at Govt. School of Arts and Crafts, Lucknow—five years.

Shape-making and Repousse :

Shape making in brass and copper, chasing, finishing and polishing at Govt. School of Arts and Crafts, Lucknow—Three years.

Casting:

Making of models, moulds, and casting in brass, copper, chasing, finishing and polishing, at Govt. School of Arts and Crafts, Lucknow—Three years.

Clay Modelling :

Sculpture and clay modelling at Govt. School of Arts and Crafts, Lucknow—three years. (2) Also a four year course at Maharaja's School of Art, Trivandrum.

Painting and Polishing :

Christian Technical School, Balasore, Orissa, Five years-Technical Diploma

Motor Mechanics :

Christian Technical School, Balasore, Orissa, Five years-Technical Diploma.

Tubewell and Water Supply work :

Christian Technical School, Balasore, Orissa, Five years-Technical Diploma.

Industrial Arts, Sandalwood and ivory carving :

Inlaying, Engraving and enamelling ; wood carving and modelling—Sri Chamarajendra Technical Institute, Mysore—Five years course—III form passed candidates eligible.

Internal Combustion Engineering:

Certificate course for fifth standard passed students—3 years—at S. N. Parek Parsi Polytechnic, Surat.

Car Driving and Service:

Twelve months special course and five months ordinary course at Automobile Engineering Institute, 13, Decres Lane, Calcutta.

Ivory, Wood carving and Inlay work :—

Two years course at Maharaja's School of Art, Trivandrum.

Training for Instructors :

The Central Training Institute at Koni, M.P., is an institution for the training of instructors. The course which lasts six months combines theoretical and practical instruction in various trades mentioned below. Three classes of students are admitted (1) Govt. sponsored (2) those sent up by private industries (3) candidates who after having studied a trade, like to train themselves as inspectors.

TECHNICAL TRADES.

1. Blacksmiths.
2. Draughtsman.
3. Electricians.
4. Machinists.
5. Mechanics—I.C.Engines.
6. Mechanics—Instrument.
7. Mechanics—General.
8. Mechanics—Motor.
9. Moulders.
10. Radio Servicers.
11. Sheet Metal workers.
12. Turners.
13. Welders (a) Gas (b) Electric.
14. Wood Workers.
    (a) Carpenters.
    (b) Cabinet makers.
    (c) Pattern Makers.

VOCATIONAL TRADES.

1. Bleaching, Dyeing and Calico-printing.
2. Cane, Bamboo and Willow work.
3. Cutting and Tailoring.
4. Hand-weaving of cotton and art silk fabrics.
5. Knitting with hand and machines.
6. Leather work.
   (a) Manufacture of foot-wear.
   (b) Manufacture of leather goods.

There is hostel accommodation for students and there is a mess for South Indian Students. Playgrounds and a swimming pool are other amenities; successful completion of the course leads to a diploma qualifying the trainee for posts of instructors in technical schools and workshops. There is also a special course for supervisors. The institute is run under the auspices of the Directorate of re-settlement and employment of the Govt. of India.

Note :—(1) Besides having the training at Koni, candidates may improve their qualifications by passing the certificate exam. in Foremanship and Supervision held by the Institute of Industrial Administration, Management House, 8 Hill St., London, W. 1. These exams. could be taken in Indian centres.

TRAINING FOR WOMEN.

Technical and Vocational Training Scheme for women at Industrial training Institute for women at Curzon Road, New Delhi has one year courses in :

(1) Bleaching, Dyeing, Printing.

(2) Knitting with hand and machines.

(3) Cutting and Tailoring.

(4) Preservation of fruits, vegetables and manufacture of confectionary.

(5) Embroidery and needle work including Salma and Tilla work.

(6) Hand weaving of fancy and furnished fabrics.

Age limits of candidates 18—25. Free training : also stipends to 50% of students

TRAINING FOR WOOD CRAFT INSTRUCTORS

There is a two year course for the Wood Craft Instructors training at Teacher's College, Saidapet.

Arts and Crafts Instructor's Course in weaving at Saidapet Teacher's College, Madras—one year—Min. Qualification: an Industrial Certificate in Weaving.

ARTS AND CRAFTS

INTRODUCTION

Arts and Crafts training is necessary in fields of painting, commercial advertising, teaching in nursery schools, and a variety of useful occupations.

INSTITUTES

The following are the institutions affording training in these subjects:—

1. Delhi Polytechnic, Delhi—All India Diploma Course—five years.
2. Delhi Polytechnic, Delhi—All India Certificate Course—part-time five years.
3. Govt. School of Arts and Crafts, Lucknow—Diploma - five years.
4. Govt. School of Arts and Crafts, Lucknow—certificate course of two years for teachers of drawing.
5. Govt. Technical Institute, Lucknow—certifiate course in painting—3 years.
6. Central School of Arts and Crafts, Hyderabad—Diploma—5 years.
7. H. H. The Maharaja's School of Arts, Trivandrum—4 years (a) Drawing and painting (b) clay modelling.
8. School of Arts and Crafts, Madras—Certificate—2 years. for general drawing ; and 3 years. for Modelling
9. Govt. School of Arts, Calcutta—Diploma—5 years.
10. Sir J. J. School of Arts, Bombay.
11. Kalabhavan Technical Institute, Baroda—Diploma—4 years.
12. There is also a course for art teachers at the Jamia Millia Islamia Teachers Training Institute at Jamianagar, Delhi.
13. Kalabhavan, Shantaniketan.

PROFESSIONAL INSTITUTE

Royal Society of Arts, John Adam St., Adelphi, London W.C. 2

SCOPE

Artists are engaged in Press, Publishers, Studios and as art executives for advertising studio of the Ministry of Information; as

teachers of art in schools like Delhi Polytechnic; artist draughtsmen are employed in Technical Schools, Research Institutions, and Medical Schools.

DOCUMENTARY FILM

'Art in Industry' illustrates the work of applied arts to improvement of industrial goods.

PAINTING AND SCULPTURE

(1) There is a two year diploma course on the above subject at Banaras Hindu University. There is a further two year course for the senior diploma in painting and sculpture.

(2) There is a two year diploma course in painting at Allahabad University.

(3) There is a diploma course in advanced painting at the Govt. School of Arts and Crafts, Egmore, the duration is one year. There is also a certificate course of three years duration.

DRAWING, ART, COMMERCIAL ART

Institutes :

(a) The Govt. School of Arts and Crafts, Egmore, Madras—certificate —3 years. General drawing—5 years, Painting—3 years, Advanced Commercial Art—1 year.

(b) A diploma course in art of duration three years is conducted by Nagpur University.

(c) One Year all India certificate course in Commercial Art at Delhi Polytechnic.

(d) There are vocational short periods (1-2 years.) courses at Delhi Polytechnic for drawing, painting, engraving and sculpture.

SCOPE

There is scope for the talented and trained artist to seek careers in art in Industry. An useful professional institute in this connection is the Institute of Art in Industry, 15, Park St., Calcutta. 16. The institute publishes a magazine called "Art in Industry" which contains valuable material for useful careers in application of art to industry.

DOCUMENTARY FILMS

On Art and Culture by Govt. of India are 'Saga in Stone', 'Indian Art through ages' 'Magnificient Memory', 'Rajput Glory',

'Cave Temples of India—Buddhist, Hindu', 'Land of Dancing Siva', 'Rustic Delights'.

GUIDE BOOK

The Daily Mail publication "Commercial Artist" is an useful book to study opportunities in this career.

TAILORING AND CUTTING

Literate—1 year

1. Marine College and Seamens' Orphanage, Novha.
2. Variety Tailoring and Cutting Academy, Poona.
3. Ideal Tailoring and Cutting Institute. Ahmedabad
4. Karnatak Tailoring College, Dharwar.
5. Modern Tailoring and Cutting Institute, Nasik.
6. Sangli Industrial School, Sangli.
7. Advirkar Tailoring College, Takurdwar, Bombay-4.
8. Navayug Tailoring College, Bombay-7.
9. Govt. Industrial School, Amreli.
10. Vijay Tailoring College, Bombay.
11. Modern Tailoring College, Bombay.
12. Bharat Shivan Karban Vidyalaya, Poona.
13. Zarapkar Tailoring College, Dadar, Bombay.
14. K. R. Wachha Charity Trust Tailoring Class, Marine Lines, Bombay.

LADIES TAILORING

1 year—IV Class.

1. Primary Handicraft Institute, Bombay.
2. Bhagini Samaj, Khetwadi Main Road, Bombay.
3. K. E. S. Industrial School, Alibag.
4. Mahila Kala Mandir, Bombay.
5. Gujarathi Hindu Stree Mandal, Bombay.
6. Lokamanya Seva Sangh, Vile-Parle.
7. Mahila Kala Bhuvan, Bombay.
8. Mahila Shivan Kala Mandir, Malvan.
9. Kumarika and Stree Mandal, Vile-Parle.
10. Bharatiya Kala Vikas, Khar.
11. Ladies Industrial Home, Khar.
12. Gujarathi Hindu Stree Mandal, Santa Cruz.
13. Stree Jain Mahila Samaj, Bombay.
14. Dawoodbhoy Fazalbhoy Muslim Women's Handcraft Institute Bombay.
15. Young Men's Hindu Association, Bombay.
16. Mahila Kala Niketan, Bombay.
17. Godebole's Tailoring and Cutting Institute, Poona.
18. Mahilashram High School, Hingne, Poona.
19. Talimi Kendra Jyoti Sangh, Ahmedabad.
20. Jamnabai Saraswati Mandir, Ahmedabad.

21. Vikar Griha, Ahmedabad.
22. Kalalaxmi Khedyate Stree Udyog Shala, Ahmedabad.
23. Pathare Prabhu Mahila Cutting and Tailoring Classes, Bombay.
24. Modasa Mahajan Stree Kelavani Mandal, Ahmedabad.
25. Bhatia Stree Mandal, Bombay.
26. Shivam Kala Mandir, Mugbhat, Bombay-4.
27. Bhagini Samaj, Bhuleshwar Centre.
28. Industrial Art School, Bombay.
29. Vanita Vikas Mandal, Nasik.
30. Nasik Mahila Mandal, Nasik City.
31. Ladies' Tailoring Institution, Poona-2.
32. Adarsha Kala Mandir, Poona-2.
33. Vanita Seva Samaj, Dharwar.
34. Karnatak Tailoring College, Dharwar.
35. Shree Vile Parle Gujarati Mandal, Vile Parle.
36. The Gujarati Hindu Stree Mandal, Thana.
37. The Vanita Samaj, Bandra.
38. The Mahila Kala Mandir, Kalyan.
39. Kala Mandir, Mugbhat Naka, Bombay-2.
40. Adarsha Kala Griha, Bombay-16.
41. Vadigaon Seva Sangh, Ahmedabad.
42. The Zorastrian Ladies Co-operative Society, Ahmedabad.
43. The Gujarati Harijan Sevak Sangh, Ahmedabad.
44. Kandivali Stree Mandal, Kandivali, Bombay.
45. Mahila Kala Kendra, Andheri.
46. Adarsha Kala Graha, Bombay.
47. Vijaya Vidyalaya, Bombay.
48. Kot Hindu Stree Mandal, Bombay.
49. Pednekar Embroidery College, Bombay.
50. Navbharat Kala Mandir, Bombay.
51. Nari Seva Sadan, Kurla.
52. Sevasadan Work-room Classes, Poona.
53. Sevasadan Society, Sholapur.
54. Maharashtra Sahakari Grahodyoga Mandal, Ahmedabad.
55. Valmiki Kayastha Mahila Mandal.
56. Surat Stree Mandal Ladies Tailoring Classes, Kapadwanj.
57. Pen Industrial School, Pen, Dist. Colaba.
58. Shri Lad Mahila Mandal, Bombay.
59. Mahila Utkarsha Mandal, Bombay.
60. Brahman Sabha Mahila Sakha, Bombay.
61. Bhagini Kala Mandir, Dadar, Bombay.
62. Mahila Kala Kendra, Bombay.
63. Mahila Sahakari Mandal Tailoring Class, Jalgaon (E.K.)
64. Usha Shivan Kartan Vidyalaya, Poona.
65. Mahatma Gandhi Smaruk Udyog Mandir, Dharmaj Dist., Kaira.
66. Bhagini Seva Samaj, Kapadwanj.
67. Mahila Vikas Mandir, Amreli.
68. Shree Kamuddha Sahakri Audyogik Vikas Mandir, Ltd., Baroda.
69. Mahila Vidyalaya, Ratnagiri.

PRACTICAL TAILORING

1. David Sasson Industrial School, Bombay.
2. Marine College and Seamens' Orphanage, Novha.
3. Secretary Schools Committee, Bombay-7.
4. Yerawada Industrial School, Yerawada.
5. Primary Handicraft Institute, Bombay.
6. Modern High School, Ahmednagar.
7. Certified School, Hubli.
8. Industrial Art School. Bombay-4.

EMBROIDERY AND FANCY WORK

1. Gujarati Hindu Stree Mandal, Bombay.
2. Bharatiya Kala Vikas, Khar.
3. Dawoodbhoy Fazalbhoy Muslim Womens' Handicraft Institute. Bombay.
4. Mahila Kala Niketan, Bombay.
5. Mahila Kala Mandir, Bombay.
6. Talimi Kendra Jyoti Sangh, Ahmedabad.
7. Vikas Griha, Ahmedabad.
8. Primary Handicraft Classes, Girgaum, Bombay.
9. Bai B. S. Bengalee Girls' High School, Bombay.
10. Mahila Shivan Kala Mandir, Malvan.
11. Bhatiya Stree Mandal, Bombay.
12. Bhagini Samaj, Khetwadi Main Road, Bombay.
13. Industrial Art School, Bombay-4.
14. Adarsha Kala Mandir, Poona-2.
15. Karnatak Tailoring College, Dharwar.
16. Jamnabai Saraswati Mandir, Ahmedabad.
17. Mahila Kala Bhavan, Bombay.
18. Mahileshram High School, Hingno, Poona.
19. Kumarika and Stree Mandal, Bombay.
20. The Gujarati Hindu Stree Mandal, Thana.
21. The Gujarati Harijan Sevak Sangh, Ahmedabad.
22. Pednekar Embroidery College, Bombay.
23. Kot Hindu Stree Mandal, Bombay.
24. Kandivali Stree Mandal, Kandivali, Bombay.
25. Navabharat Kala Mandir, Bombay.

TAILORING AND CUTTING

Matriculates who wish to take up careers in this line may pass the Govt. Technical examinations on this subject. Together with that they could study for the examinations of the "Tailor and Cutter" Academy at London which has a one year course. Those who cannot afford to study for one year in U.K. may however take their correspondence course and appear for their examination in India. The successful passing of the examination entitles them to receive the

master tailor's certificate. The art of tailoring includes upholstories and the profession of tailor is increasingly coming into prominence thus affording good careers in the field.

INSTITUTES

Artisan courses at

(1) Occupational Institute, Hassan, Mysore State.
(2) Occupational Institute, Devangere, Mysore State.
(3) Occupational Institute, Bangalore, Mysore State.

COMPOUNDER'S COURSE

(1) *Allopathy*: There is a one year compounder's course conducted at the Government hospitals. Matriculates are eligible for the course. Candidates should apply to the District Medical Officers or Superintendents of the training centres at Govt. hospitals.

(2) *Unnani, Siddha, and Ayurveda, compounders training* (for 3rd form passed Candidates) The following is the list of institutions of indigenous medicine recognised for Compounder's training in this branch.

1. College and Hospital of Indigenous Medicine, Madras.
2. Local Fund Siddha Dispensary, Tirukoshtiyur.
3. Municipal Ayurvedic Dispensary, Tenali.
4. Local Fund Siddha Dispensary, Puliangudi.
5. Municipal Ayurvedic Dispensary, Kothapet.
6. P. T. Lee Chengalvaroya Naicker's Free Ayurvedic Dispensary, Vepery, Madras.
7. Municipal Siddha Dispensary, Begumpore.
8. Municipal Siddha Dispensary, Vellore.

The course lasts one year.

SCOPE

Compounders may be taken in general hospitals, private hospitals, in railways, and as medical store-keepers in port trusts and other organisations.

VOCATIONAL TRADES

Blacksmithy: Central Polytechnic Industrial School, Madras. Certificate course—2 to 3 years.

Tamilnad Polytechnic, Madura (Same course).

Rayalaseema Polytechnic, Bellary (same course) Balasore Technical School, Orissa—5 years-diploma.

Building and structural draftsmanship: Central Polytechnic-Certificate course 2 to 3 years.

Electric and Gas Welding: Central Polytehnic—Certificate 2 to 3 years.

Kerala Polytechnic, Kozhikode, same course.

Karnataka Polytechnic, Mangalore same course.

Also 3 years Diploma course at Occupational Institute, Bangalore.

Fitting and Erecting: Central Polytechnic—Certificate—2 to 3 years. Tamilnad Polytechnic—same course.

C. N. T. Institute Certificate course—1 year. Balasore Technical School, Orissa—5 years Diploma.

Composing and Proof Reading: Central Polytechnic—Certificate—2 to 3 years.

Electric Wiring: Central Polytechnic—Certificate—2 to 3 years. Tamilnad Polytechnic, Madura. (same course)

Andhra Polytechnic, Kakinada (same course).

Rayalaseema Polytechnic, Bellary (same course).

Balasore Technical. School, Orissa—5 years—Diploma.

C. N. T. Institute, Madras 1 year (Govt. competency certificate) J. Occupational Institute, Bangalore, 1 year.

Machine minding and Binding: Central Polytechnic—Certificate—2 to 3 years.

Metal Workers Drawing: Central Polytechnic—certificate—2 to 3 years.

Plumbing and Building Drawing: Central Polytechnic—Certificate—2 to 3 years.

Toymaking and Moulding: Tamilnad Polytechnic, Madurai—Certificate—2 to 3 years.

Machinists and Turners: Tamilnad Polytechnic, Madurai—Certificate—2 to 3 years.

Balasore Technical School, Orissa. 5 years Diploma.

Government Occupational Institute, Allahabad—2 years.

Food Technology: Kerala Polytechnic, Kozikode—Certificate—2 to 3 years.

General Mechanics: Kerala Polytechnic Kozikode—Certificate—2 to 3 years.

Karnataka Polytechnic, Mangalore.—same course.

Rayalaseema Polytechnic, Bellary, (same course.)

Light Metal Casting: Kerala Polytechnic Kozikode—Certificate—2 to 3 years.

C. N. T. Institute—Certificate—1 year.

Rattan Work: Karnataka Polytechnic, Mangalore—Certificate—2 to 3 years.

Maharaja's School of Art, Trivandram—2 years course.

Handloom Weaving: Andhra Polytechnic, Kakinada—Certificate—2 to 3 years.

There is a course of 5 months which is specially designed for the class of professional weavers at the Govt. Textile Institute, Washermanpet, Madras. The same Institute has a 10 months Instructor's course on handloom weaving.

Knitting: There is an artisan course of 10 months at the Govt. Textile Institute, Washermanpet, Madras.

Bleaching: There is a 10 month Instructor's course on hand process in bleaching at the Govt. Textile Institute, Washermanpet, Madras.

Dyeing and Cloth Printing: There is a 10 months course on this subject at the Govt. Textile Institute, Washermanpet, Madras.

Powerloom Weaving: There is a special course of three months on this subject at the Govt. Textile Institute, Washermanpet, Madras.

Goldsmithy: Diploma course of 3 years—Govt. School of Arts and Crafts, Egmore, Madras—no fees.

Also at Govt. School of Arts and Crafts, Lucknow, 5 years

Sheet Metal Work: Diploma course of 3 years—Govt. School of Arts and Crafts, Egmore—no fees.

Govt. Occupational Institute, Allahabad—1 year.

Engraving: Diploma course of 3 years—Govt. School of Arts and Crafts, Egmore, Madras—no fees.

Also at Govt. School of Arts and Crafts, Lucknow—3 years

Enamelling: Diploma course of 3 years—Govt, School of Arts and Crafts, Egmore, Madras—no fees.

Design: Diploma course of 3 years—Govt. School of Arts and Crafts, Egmore, Madras—no fees.

Machinists: Diploma—3 years—Occupational Institute, Bangalore.

Metal Work : Diploma—3 years—Occupational Institute, Bangalore.

Printing : One year Certificate course at C. N. T., Institute, Madras.

Weaving : One year Certificate course at C. N. T. Institute, Madras.

Foreman Mechanic : 3 years course at C. N. T. Institute. Madras.

Turners and Fitters : Mysore Iron and Steel Works, Silver Jubilee School, Badravathi—2 years Certificate course.

Silver smithy and Tuft gari work : Maharaja's School of Art, Trivandram—two years.

Ceramic Section :

Ceramics—Diploma course 3 years at J. Occupational Institute, Bangalore.

Pottery Training Centre. Rajahmundry :

Courses offered—Artizan course—One year.

Qualification for Admission—Applicants should be professional potters with at least 5 years experience in the use of potters wheel—Age between 16-20.

(NO TUITION FEES CHARGED)

Ceramic Section, Gudur :

Courses offered—Artizan course (One year) and Supervisors course (2 years).

Qualification for Admission—*Artizan course* : Applicants should be professional potters with at least 5 years experience in the use of potters wheel—Age between 16-20.

Supervisors course—Minimum qualification S. S. L C. with eligibility for College course—Age 15-20.

(NO TUITION FEES CHARGED)

Glass Section :

Glass Blowing Training Centre, Madras :

Courses offered—Training in Scientific Glass Blowing (One year)

Qualification for Admission—Minimum qualification is S. S. L. C. with eligibility for College course. Artizans engaged in the industry will be given preference—Age 16-20.

(NO TUITION FEE)

Glass Bangle and Bead Training Centres, Kalahasti:

Courses offered—Training in Manufacture of Glass Bangle and Beads—One year.

Qualification for Admission—Artizan engaged in the manufacture of Glass Bangle and Beads will be given preference—Age 18-25.

(NO TUITION FEE)

Name of the Institution	*Scholarships or Stipend*
1. Central Polytechnic, Madras.	Diploma courses—Four Scholarships at the rate of Rs 20 per mensem per Candidate in each Class. Certificate courses: Four stipends at rate of Rs. 15 p.m. per Candidate in each Class.
2. Tamilnad Polytechnic, Mathurai. 3. Kerala Polytechnic, Kozhikode. 4. Karnataka Polytechnic, Mangalore 5. Andhra Polytechnic, Kakinada. 6. Vuyyuru Polytechnic, Vuyyuru. 7. Arthur Hope Polytechnic, Coimbatore.	Diploma courses—Two Scholarships at the rate of Rs. 20 p.m. per candidate in each Class. Certificates courses—Four stipends at the rate of Rs. 15 p.m. per candidate in each Class.

8. Rayalaseema Polytechnic, Bellary: Diploma courses—Five Scholarships at the rate of Rs. 25 p.m. per candidate in each Class.

Certificate courses—Eight stipends at the rate of Rs. 20 p.m. per Candidate in each Class.

Name of the Institution	*Scholarships or Stipend*
9. Textile Institute, Madras.	(1) Instructors course in hand. Process of Bleaching. Dyeing and Cloth printing: Living allowance of Rs. 35 p.m. each for 3 Candidates. (2) Special course for Weaver; Living allowance of Rs. 35 p.m. for each for 20 Candidates. (3) Special course in Jackquard Weaving. Living allowance of Rs. 35 p.m. each for five Candidates.

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Name of the Institution	*Scholarship or Stipend*
10. Institute of Leather Technology, Madras.	Diploma courses. 3 Scholarships at Rs 30 p.m. each in each Class. Certificate courses: 3 Scholarships at Rs. 20 p.m. each in each Class. Artizan course: Rs. 25 p.m. each is awarded to all students.
11. Pottery Training Centre, Rajahmundry :	Artizan course: 6 Scholarships at the rate of Rs. 25 p.m. per Candidate for 11 months.
12. Ceramic Section, Gudur.	Supervisors course; 8 Scholarships at the rate of Rs. 30 p.m. per Candidate for 11 months. Artizan: 8 Scholorships at the rate of Rs. 20 p.m. per Candidate for 11 months.
13. Glass Blowing Centre, Madras.	10 Scholarships at rate of Rs 25. per Candidate for 11 months
14. Glass Bangle and Bead Training Centre, Kalahasti.	15 Scholarships at the rate of Rs. 25 per Candidate for 11 months.
15. Glass Bangle and Bead Training Centre, Kasargod.	do do

Arts Section:

School of Arts and Crafts, Madras.

General Drawing:	I year	8	Scholarships at	Rs. 10 p.m. each.
	II ,,	8	do	do
Printing:	I ,,	2	do	at Rs. 15 p.m. each.
	II ,,	2	do	do
	III ,,	2	do	do
Commercial Art:	I ,,	2	do	do
	II ,,	2	do	do
	III ,,	2	do	do
Advanced course in Painting:		2	do	at Rs. 25 p.m. each.
Advanced course in Commercial Art:		2	do	do
Modelling:	I ,,	2	do	do
	II ,,	2	do	do
	III ,,	2	do	do

Crafts Section :

Wood work (Elementary)	I year	4	Scholarships	at Rs.	10 p.m.	each
	II ,,	4	do		do	
	III ,,	4	do		do	
Wood work (Advanced)	I ,,	4	do	at Rs.	12/8/-	each.
	II ,,	4	do	do	15/-	do
Sheet Metal work :	I ,,	4	do	do	10/-	do
	II ,,	4	do	do	12/8/-	do
	III ,,	4	do	do	15/-	do
Engraving :	I ,,	4	do	do	10/-	do
	II ,,	4	do	do	10/8/-	do
	III ,,	4	do	do	15/-	do
Goldsmithy :	I ,,	4	do	do	10/-	do
	II ,,	4	do	do	10/8/-	do
	III ,,	4	do	do	15/-	do
Enamel work :	I ,,	4	do	do	15/-	do
	II ,,	4	do		do	do
Design :	I ,,	4	do		do	do
	II ,,	4	do		do	do
	III ,,	4	do		do	do

(Among the Scholarship holders, the pupils coming from the Mofussil will be eligible for a City Allowance of Rs. 10 p.m. to meet the cost of living in the City).

Note : After obtaining a Vocational Training one can set up a small Cottage Industry ; there is provision for a loan of Rs. 500 from Govt. (Director of Industries) for such setting up.

The Documentary Films of Govt. of India useful in this connection are :—

Industrial India-dealing with the Enamel, Lantern and Glass Blowing Industry of India.

Potters : A film on pottery making in India.

Suds : A film on Soap making Industry in India.

Weavers of Surat : On Surat's Textile Industry.

Country Crafts : A film on boat Building and Allied Trades.

Art in Industry : Scenes shot in the J. J. School of Art illustrating application of Art to Industry.

(Qualifications for Admission to all courses detailed below is a pass in the Fifth Standard).

Name of the Course.	Institutes where the course is taught
1. Agriculture.	U. L. C. M. Rural Reconstruction Industrial School, Guntur.
2. Applied Mechanics.	Commonwealth Trust Engineering Works, Mangalore.
3. Bee-keeping.	The Gokulam Cottage Industrial School, Triplicane, Madras.
4. Book-binding.	Madrasi-Hussainin Yateemkhana Industrial School, Thousand Lights, Madras.
5. Brush-making.	Anjuman Industrial School, Mount Road, Madras.
6. Cement Work.	Sri Krishnashram Industrial School, Guntur.
7. Dairy-keeping.	U. L. C. M. Rural Reconstruction Industrial School, Guntur.
8. Dress-making, Embroidery	Lalithagana Parisramika Kalasala, Rajahmundry.
	St. Joseph's Orphanage and Industrial School, Guntur.
	Sri Sarada Niketan Industrial & Needle Work School, Guntur.
	Premlatha Girls' Industrial School, Guntur.
	O. E. L. M. Girls' Industrial School, Nayudupet, (Nellore Dt.) Embroidery only. American Arcot Mission Women Industrial School, Palmaner, Chittur Dt.
	Seton School of Embroidery and Needle work, Kilpauk, Madras.
	The Seva Sadan Industrial School, Chetput, Madras.
	St. Anne's Industrial School, Royapuram, Madras.
	St. Jcseph's Industrial School for Girls. Mylapore, Madras.
	Rani Rajalakshmi Industrial Institute, Mylapore, Madras.
	Madras Hindu Sevak Sang Industrial School for Girls, 67, Mulla Saheb St., Georgetown Madras.
	Methodist Mission Industrial School, Ikkadu, Chingleput. District.
	St. Cicily's Industrial School, Kumbakonam.
	Holy Cross Convent Industrial School, Trichinopoly.
	St. John D Britto Industrial School, Trichinopoly. (Dress making.)
	St. Joseph's Girls' Industrial School, Madurai.
	R. C. Lace Industrial School, Vadakankulam. Tirunelveli District.
	Hindu Girls' Industrial School, Kudankulam, Tirunelveli Dt. (Lace Making only).
	Methodist Mission Industrial School, Dharapuram.
	St. Vincent's Girls' Industrial School, Kozhikode.
	St. Martha's Industrial School, Bethany, Mangalore.
	Syllabus :—Facts about construction of materials, implements, stitches in common use, temporary stitches, permanent stitches, seam, neatening of raw edges, hems-cutting and joining crossway strips. Disposal of fullness in a garment, openings, drafting and cutting out dress making, embroidery. Theoretical and drawing stitches used in embroidery crops stitch, hemstitch, and drawn thread, different kinds of embroidery, weaving crocheting, knitting, fastening, mending, use of tapes and guesets, sleeves, yokes, and collars, food nutrition, child care and gardening.

9. Driving (Oil Engine)	C. N. T. Institute, Vepery, Madras.
10. Dyeing.	Sri Krishna Udyog Sala, P. O. Anandashram, Ram-nagar South Kanara District.
11. Lacquering.	District Board Industrial School, Tanjore. Maharaja's School of Art, Trivandrum—2 years.
12. Leather Works.	U. L. C. M. Rural Reconstruction Industrial School, Guntur.
13. Machine Drawing.	Orr's Assisted Industrial School, Mount Road. Madras.
14. Mat-weaving.	Sri Sarada Niketan Industrial School, Guntur. Premlatha Girls' Industrial School Guntur. Industrial School for Blind, Palayamkottai.
15. Paper-making.	U. L. C. M. Rural Reconstruction Industrial School Guntur. The Gokulam Cottage Industrial School, Triplicane, Madras. Thakkar Bapa Vidyalaya, Thyagarayangar, Madras. Harijan Industrial School, Kancheepuram. District Board Industrial School, Tanjore.
16. Poultry Keeping.	U. L. C. M. Rural Reconstruction Industrial School, Guntur.
17. Printing.	Pasumalai Trade School, Madurai.
18. Spinning.	Lalithagana Parisramika Kalasala, Rajahmundry. Sri Sarada Niketan Industrial School, Guntur. Premalata Girls' Industrial School, Guntur. The Gokulam Cottage Industrial School, Triplicane, Madras. Rani Rajyalakshmi Industrial Institute, Mylapore, Madras. Sri Krishna Udyog Sala P. O. Anandhashram, Ramnagar, South Kanara District.
19. Tailoring.	S. P. G. Art Industrial School, Nazareth, Tirunelveli Dt. St. Joseph's Industrial School, Adaikkalapuram. St. Martha's Industrial School, Bethany, Mangalore. Sri Krishna Udyog Sala, P. O. Anandashram, Ramnagar, South Kanara Dt.
20. Tape Weaving.	Sri Sarada Niketan Industrial School, Guntur. Premalatha Girls' Industrial School, Guntur. Industrial School for Blind, Palayamkottai.
21. Turning, Fitting & Smithy.	Sri Krishna Industrial School, Suryaraopet Vijayavada. St. Michael's Industrial School, Guntur, (Smithy only) C. N. T. Institute, Vepery, Madras. (Fitting only) C. S. M. Industrial School, Dindigul (Fitting only)
22. Workshop Practice and Theory.	Orr's Assisted Industrial School, Mount Road, Madras.

III. Technical diploma for men with experience :—

The Technical Diploma Examination Board, Madras accepts Candidates with 10 years practical experience in Appropriate Trades for entrance examination for qualifying to appear for Diploma Examinations in Automobile, Civil, Electrical and Mechanical Engineering. Further particulars could be had from the Chairman, Technology Diploma Examination Board, Mackay's Garden, Madras-6.

IV. Technical Examinations leading to careers in Offices both Governmental and private.

The student after Matriculation may study through Technical Institutions or as apprentices in Industries and appear for the Govt. Technical Examinations Some of these are tabulated below.

(1) Book-keeping,
(2) Banking.
(3) Co-operation.
(4) Auditing.
(5) Shorthand (English, Tamil, Telugu, Malayalam).
(6) Typewriting (English, Tamil, Telugu).
(7) Indian Music.
(8) Dancing.
(9) Free hand Outline and model drawing.
(10) Design.
(11) Geometrical Drawing.
(12) Painting.
(13) Modeling.
(14) Engraving.
(15) Compositor's work.
(16) Proof Reader's work.
(17) Press work.
(18) Machine Work.
(19) Printer's Warehouse Work.
(20) Book Binding.
(21) Type Casting.
(22) Stereo Type Work.
(23) Electro Type Work.
(24) Lace-making.
(25) Tailoring
(26) Needlework and Dress-making.
(27) Embroidery.
(28) Agriculture.

(29) Engine Driver.
(30) Engineer Operator II class.
(31) Engineer Operator I class.
(32) Attendants on Refrigerating Machines.
(33) Water Works Fitter.
(34) Pipeline Fitter (water works).

The Govt. Technical Examinations are intended for the encouragement of Scientific and Technical instruction with special reference to manufacture and industries and generally to the necessities of the practical side of life.

Information regarding the various subjects in which the Examinations are held, the conditions of admission to each grade of Examination, groups of subjects for which group Certificates and Diplomas are awarded will be found in the "Notification regulating the Govt. Technical Examinations, Madras". The nature and scope of the Examination in each subject are given in the syllabus for that subject. These publications could be had from the Superintendent, Govt. Press, Mount Road, Madras-2.

In preparing for the Govt. Technical Examinations of Typewriting, Shorthand, Book-keeping, theory and practice of Commerce, Banking and Commercial Geography, the students should study in approved Schools of Commerce. A list of such schools could be had from the Office of the Commissioner for Govt. Examinations, Madras-6.

Note: The Group Certificates in (a) Book-keeping (b) Banking (c) Shorthand (d) Typewriting of the Madras Govt. is an eligible minimum qualification to undergo the course for the All-India Diploma in Commerce.

The Government Technical Examinations have the following main groups. Candidates passing all subjects of the group will be given the group certificates.

1. **Civil Engineering Group.**

Building Materials and Construction, Building drawing and estimating, Hydraulics and Irrigation works, Surveying and levelling, Applied Mechanics, Mensuration, Practical Plane and Solid Geometry.

2. **Mechanical Engineering Group.**

Machine Drawing.
Machine Construction.
Heat Engines.

3. **Electrical Engineering Group.**
   Electrical light and Power.

4. **Agricultural Group.**
   Agriculture.

5. **Textile Fabrics Group.**
   Handloom Weaving.

6. **Commerce Group.**
   Book-keeping.
   Theory and Practice of Commerce.
   Banking.
   Commercial Geography.
   Short-hand (English, Tamil, Telugu, Kannada, Oriya).
   Typewriting (English).
   Typewriting (Tamil).
   Typewriting (Telugu).

7. **Certificate of Competency for Engine Driver.**

8. **Certificate of Competency for Engineer Operator-First Class.**

9. **Certificate of Competency for Engineer Operator-Second Class.**

10. **Certificate of Competency for attendents on refrigeration.**

11. **Certificate of Competency for Water-works Fitter.**

12. **Certificate of Competency for Water-works Pipe-line Fitter.**

13. **Indian Music and Dancing Group.**
    Indian Music.
    Dancing.

14. **Drawing Group.**
    Freehand and Outline Drawing.
    Design.
    Geometrical Drawing.
    Painting.
    Modelling.
    Engraving.

15. **Printing, Book-binding and Type-founding Group.**
    Letter Press Printing.
    Compositor's Work.
    Proof-reader's work (English.)

Proof-reader's work (Language-Indian and Classical).
Press Work.
Machine Work.
Printer's Warehouse Work.
Book-binding.
Type-casting.
Stero-typing.
Electro-typing.

16. **Textile Fabrics Group.**
Lace Making.

17. **Tailoring and Dress-making Group.**
Tailoring.
Needlework and Dress-making.
Embroidery.

LIST OF AIDED INDUSTRIAL SCHOOLS IN THE MADRAS STATE

Visakapatnam District.

1. St. Alosius Industrial School, Vizagapatam.
2. School of Arts and Crafts, Vizianagaram.

Krishna District.

1. St. Joseph's Industrial School, Gunadala, Vijayawada.

West Godavari District.

1. Sri Harijana Industrial School, Bhimavaram, West Godavari District.
2. Gandhi Memorial Harijan Industrial Home, Tanuku, West Godavari District.

Guntur District.

1. U. L. C. M. Rural Reconstruction Industrial School, Guntur.
2. Sri Krishnashram Industrial School, Guntur.
3. St. Michael's Industrial School, Guntur.
4. St. Joseph's Orphanage and Industrial School, Guntur.
5. Sree Sarada Niketan Industrial School, Guntur.
6. Premlata Girls' Industrial School, Guntur.
7. C. H. Kutumbaraya Board Industrial School, Pedapandi,

Nellore District.

1. O. E. L. M. Girls Industrial School, Nayudupet.

Chitoor District.

1. American Arcot Mission Women Industrial School, Palamaner, Chittoor District.

Madras.

1. C. N. T. Institute, Vepery, Madras,
2. Anjuman Industrial School, Mount Road, Madras.
3. Ramakrishna Mission Technical Institute, Mylapore, Madras.
4. The Gokhulam Cottage Industrial School, 11. B, Eldams Road, Madras-18.
5. V. S. Rajagopalan's Radio Institute, Mount Road, Madras-2.
6. Thakkar Baba Vidyalaya, T. Nagar, Madras.
7. Madrasi-Hussainy Yateemkhana Industrial School, Thousand Lights, Madras.
8. Seton School of Embroidery and Needle Work, Kilpauk, Madras.
9. The Sevasadan Industrial School, Chetput, Madras.
10. St. Anne's Industrial School, Royapuram, Madras.
11. St. Joseph's Industrial School for Girls, Mylapore, Madras.
12. Rani Rajyalakshmi Industrial Institute, Andhra Mahila Sabha Buildings, Mylapore, Madras.
13. Madras Hindu Sevak Sangh Industrial School for Girls, 67, Mulla Saheb Street, G. T. Madras.
14. Royal Telegraph and Wireless Training Institute, 49 Gangathareswarar Koil Street, Purasawalkam, Madras. 7.

Chingleput District

1. American Advent Mission Industrial School, Velacheri, St. Thomas Mount.
2. Harijan Industrial School, Kancheepuram.
3. Government Victory Memorial Blind Industrial School, Poonamallee.
4. Lady Wellingdon Leprosy Sanatorium, Tirumani, Chingleput.
5. Methodist Mission Industrial School, Ikkadu.
6. St. Antony's Industrial School, St. Thomas Mount.

North Arcot District

1. Anjuman Industrial School, Vellore.

2. Anjuman Industrial School, Melyisharam.
3. Anjuman Industrial School, Tirupallur.
4. Don Bosco Industrial School, Vellore.

South Arcot District

1. St. Joseph's Industrial School, Tindivanam.
2. Danish Mission Industrial School, Panruti.

Tanjore District

1. District Board Industrial School, Tanjore.
2. St. Francis Xavier's Industrial School, Tanjore.
3. St. Mary's Industrial School, Kumbakonam.
4. Municipal Arts School, Kumbakonam.
5. St. Cicily's Industrial School, Kumbakonam.

Tiruchirapalli District

1. St. Joseph's Industrial School, Tiruchirapalli.
2. Karur Industrial School, Karur.
3. Holy Cross Convent Industrial School, Tiruchirapalli.
4. St. John D' Britto Industrial School, Tiruchirapalli.
5. Vincent's Technical Institute, Tiruchirapalli.

Mathuari District

1. Pasumalai Trade School, Mathurai.
2. The Arts School, Mathurai.
3. C. S. M. Industrial School, Dindigul.
4. St. Joseph's Girls' Industrial School, Mathurai.

Tirunelveli District

1. S. P. G. Art Industrial School, Nazareth.
2. St. Joseph's Industrial School, Adaikalapuram.
3. Industrial School for the Blind, Palamcottah.
4. St. Ignatius Industrial School, Tuticorin.
5. R. C. Lace Industrial School, Vadakankulam.
6. Hindu Girls' Industrial School, Kudamkulam.

Salem District

1. St. Theresa's Industrial School, Naravaneri, Salem.

Coimbatore District

1. St. Joseph's Industrial School, Coimbatore.
2. P. S. G. & Sons Charity Industrial Institute, Peelamedu.
3. Methodist Mission Industrial School, Dharapuram.
4. Sri Ramakrishna Mission Vidyalaya School of Engineering, Perianaikkenpalayam, Coimbatore.

Nilgiris District

1. St. Joseph's Industrial School, Ootacamund.

Malabar District

1. St. Vincent's Girls Industrial School, Calicut.

South Kanara District

1. Commonwealth Trust Engineering Works,Mangalore.
2. St. Martha's Industrial School, Bethany, Mangalore.
3. St. Joseph's Industrial School, Bethany, Mangalore.
4. Sri Krishna Udyog Sala P. O. Anandashram, Ramnagar, via Kanhangad.

List of Government Technical Institutions.

1. Central Polytechnic, Madras.
2. Andhra Polytechnic, Kakinada.
3. Vuyyuru Polytechnic, Vuyyuru, Krishna District.
4. Tamilnad Polytechnic, Mathurai.
5. Arthur Hope Polytechnic, Coimbatore.
6. Kerala Polytechnic, Kozhikode, Malabar.
7. Karnataka Polytechnic, Mangalore, South Kanara.
8. Rayalaseema Polytechnic, Bellary.

List ot Technical Examinations conducted in the Travancore areas.

Name of Examinations.	*Subjects.*	*Remarks.*
I. Madras Govt. Technical Examinations.	All subjects under Commerce Group (Lower and Higher)	Twice a year
	All subjects under Drawing Group (Lower and Higher)	Once a year
	Civil Engineering (Lower and Higher)	do
	Weaving (Lower and Higher)	do
	Electric light and power (Lower and Higher)	do
2. London Chamber of Commerce Examinations.	All subjects in commerce.	Twice a year
3. Travancore Government Technical Examinations.	Malayalam Shorthand and Typewriting	Once a year

List of grant-in-aid Technical Schools in U. S. T. C.

1. Kanimadom Weaving School.
2. Chitra Drawing School, Nagercoil.
3. Krishna Khadi Weaving School, Agasteswaram.
4. St. Joseph's Weaving School, Puthencada.
5. Neyyoor Weaving Institute.
6. Selvamony Manas Vilas Weaving School, Palliyadi
7. Sadhusamrakshanathi Weaving School.
8. Sri Chitrodayam Weaving School.
9. Rural Industrial School, Melpuram.
10. Sahaya Vilasom Weaving School, Piracode.
11. Sri Velayudha Vilasom Weaving School, Arumanoor.
12. David Vilasom Technical School, Oolathanny.
13. Paraniyam Weaving School.
14. Kodankara Weaving School.
15. Kottukal Charivuvila Weaving School.
16. Muttacaud Weaving School.
17. Kulathoor Weaving School, Neyyattinkara.
18. Sri Neelakanta Vilasom Weaving School, Neyyattinkara.
19. Vittivila Weaving School, Neyyatinkara.
20. Little Flower Weaving School, Pulluvila.
21. Little Flower Embroidery and Needleworks School.
22. Sri Rama Vilasom Weaving School, Balaramapuram.
23. Chengal Weaving School.
24. Arayoor Weaving School.
25. St. Joseph's Weaving School, Pulluvila.
26. Kuttaninathu Weaving School.
27. Kalathanny Weaving School.
28. Adventapuram Weaving School.
29. Thirupuram Weaving School.
30. Chempoor Weaving School.
31. Sri Yesu Asramam Weaving School, Kunnapuzha.
32. Sri Yesu Asramam Girls' Technical School, Kunnapzuha.
33. St. Mary's Weaving School, Poonthurai.
34. Vattiyurkavu Weaving School.
35. Sri Padma Vilasom Weaving School, Srivaraham.
36. Sadhu Yuvathi Vijayam Girl's Technical School, Poojapura.
37. Hindu Mahila Mandiram Weaving School, Poojapura.
38. Sri Krishna Vilasom Weaving School, Nedumangad.
39. Konniyoor Mylam Weaving School.
40. Sivananda Vijayam Weaving School, Amechel.

41. Kattakada Weaving School.
42. Attingal Weaving Institute, Chirayinkil.
43. S. N. D. S. Orphanage Weaving School, Sivagiri.
44. Sree Leela Vilasom Painting School, Attingal.
45. Bhagavati Vilasom Weaving School, Chirayinkil.
46. Shanmuga Vilasom Weaving School, Keezhattingal.
47. Saraswathi Vilasom Weaving School for Girls, Kadakavoor.
48. Nazareth Orphanage Weaving School, Kottiyam.
49. Chathannoor Weaving School.
50. S. N. V. Khadi Industrial School, Paravur.
51. Onattukara Weaving School.
52. Kattuvalli Smithery School.
53. Ravivarma School of Painting, Mavelikara.
54. Dharmapradayani Weaving School, Mavelikara.
55. Madhavasivanada Vilasom Weaving School, Chennithala.
56. Grama Seva Charka Sangam, Onattukara.
57. St. Mary's Weaving School, Kalloopara.
58. C. M. S. Weaving School, Thiruvella.
59. Padmodayan Weaving School, Piralassery, Chengannoor.
60. P. R. D. S. Weaving School, Eraviperoor.
61. St. Mary's Weaving School, Pampadi.
62. Sri Devi Vilasom Weaving School, Peringalipuram.
63. Weaving and Spinning Institute of Mahila Sadanam, Thiruvella.
64. Bhagavathi Vilasom Weaving School, Uzhava.
65. St. Rita's Weaving School, Kattoor.
66. Viswajee Madom Weaving School, Muhamma.
67. Subhodayam Weaving School, Vechoor.
68. C. M. S. Industrial School, Kottayam.
69. St. Antony's Weaving School, Athirampuzha.
70. P. John Memorial Weaving School, Madapalli.
71. Little Flower Mat Weaving School, Paipad.
72. St. Mary's Weaving School, Kanam, Vazhoor.
73. St. Joseph's Weaving Institute, Changanacherry.
74. St. Thomas Weaving Institute, Kothala.
75. St. Thomas Weaving School, Mookanoor.
76. Gramodharana Kudil Vyavasaya School, Choondickal,
77. Thirukudumba Vilasom Weaving School, Kondoor.
78. St. Mary's Technical School, Kozhuvanal.
79. Mahatma Khadi Asramam, Elanthoor.
80. Swadeshabhimani Charka Sanghom, Bharanikavu.

List of unaided Schools

1. The Salvation Army Weaving School, Krishnancoil.
2. Moonthiravilai Weaving School, Puthoor, Rajakamangalam.
3. Shanmukha Vilasom Weaving School.
4. Bhagyavilasam Weaving School, Marthancode.
5. Radhavilas Weaving School, Vanniyoor.
6. Sri Chitrodayam Weaving School, Evicode.
7. Chithra Kalalayam, Pacode, Kuzhithura.
8. Karunalaya Parioposhini Weaving School, Nadavaurkolla.
9. Sri Chithra Vilasom Weaving School, Malayinkil.
10. Arunodaya Vilasom Weaving School, Kovalam.
11. Nagapuram Technical School, Poovar.
12. David Vilasom Carpet Weaving School, Oolathanni.
13. Thozhukal Weaving School.
14. Kerala Hindu Mission Weaving School, Kandalai.
15. Rattan Industrial School, Cantonment, Trivandrum.
16. Ambika Vilasom Weaving School, Konniyoor.
17. Weaving School, Nalanchira in Chettivilagom Pakuthy.
18. Chiriya Konniyoor Weaving School, Konniyoor.
19. Velloorkonam Weaving School.
20. Janardhana Vilasom Weaving School, Varkala.
21. Sri Shanmukha Vilasom Carpentry School, Aiyoor.
22. Warkala Sankara Vilasom Drawing School, Attingal.
23. Thelliyoor Weaving School, Vennikulam.
24. Pullad Painting School.
25. The St. Joseph's Mat Weaving School, Kalloopara,
26. Spinning & Weaving under the management of the Village, Panchayat, Aiyroor.
27. Catholicate Weaving School, Pathanamthitta.
28. Rural Reconstruction Weaving Centre School, Mylapra.
29. Catholicate Weaving School, Kizhavalloor, Konni.
30. Grameena Vyavasaya School, Kunjipadam, Ambalapuzha.
31. Jubilee Home Weaving School, Alleppy.
32. Anicad Weaving School, Chengalam,
33. M. S. C. Weaving School, Cheppad.
34. Weaving School under the management of Young Women's Hindu Association, Sherthalai.
35. St. Joseph's Weaving School, Thannirmukkam.
36. Weaving School, Vadakaikara, Poonjar.
37. The Kudayathur Co-operative Society No. 1387, Weaving School, Arakulam.
38. The Holy Family Industrial School, Karukutty.

39. St. Thomas School of Painting, Perumbavoor
40. St. Mary's Weaving School, Payipad.
41. Industrial School at Kanam, Vazhoor, Changancherry.
42. St. Joseph's School, Kunamavu at Valluyally in Kattuvally Pakuthy, N. Parur.
43. S. K. V. Industrial School, Paravur.
44. Mahadeva Sivananda Vilasom Weaving School, Thiruvaikundam.
45. Antony Vilasom Weaving School, Karunkal.
46. P. Yohannan Memorial Weaving School, Madapally.
47. Coir Industrial School, Thycattussery.
48. St. Joseph's Weaving School, Maduraveli.
49. Sri Vijayananda Weaving School, Kuzhkozhur.
50. Karayamparampu Weaving School, Kunnathunad.
51. Weaving Institute, Kummanam, Kottayam.
52. Ambika Vilsom Weaving School, Pallupuram.
53. Sri Krishna Vilsom Weaving School for Girls, Keezhattingal.
54. Pizhaku Nirthanamitran Cottage Industrial School.
55. Venkulam Weaving School.
56. Chennakal P. R. D. S. Weaving School, Ranni.
57. Joseph Weaving Institute, Mattakkara.
58. Anantha Raj Paul Memorial Technical Institute, Marthandam.
59. Rural Industrial School, Anchal.
60. Gramodharana Weaving School, Methukummal.
61. Sacred Hearts Convent Weaving School, Palai.
62. Weaving School for Girls Thirumala.
63. Technical School, Adoor.
64. Weaving School, Aylamon.
65. St. Rock's Weaving School, Palai.
66. St. Joseph's Convent Weaving School, Pattanacad.
67. Sri Ganasodayam Weaving School for Girls, Koonthalloor.
68. St. Joseph's Orphanage Weaving School, Punnathura.
69. Arts Studio, Neyyoor.
70. Distress Relief Institute, Kuravankonam, Trivandrum.
71. Weaving School run by Sry. A. Rema Devi at Attingal.
72. M.G.M. Spinning & Weaving School, Muthukulam, Keerikad
73. Weaving School, Vakkom, Kadakavoor.
74. Ganesh C/o. Giri Weaving School Veli, Attipra.
75. Technical School, Silvapuram, Vilavancode.
76. Embroidery & Needle Work School, Venganinna Agasthyavilasom Gramodharana Kendram, Karinkulam.

77. A. Z. Memorial Gramodharana Centre, Pulluvila, Nellikkakuzhi.

78. S. M. R. V. Technical Nagercoil Cotton Weaving Institute, Nagercoil.

List of Industrial and Technical Schools in Cochin Area

Name of School	*Name of subjects taught*
G.I.S., Veliyanad	Weaving
,, Narakkal	Weaving and coir works
,, Cranganur	Weaving
,, Irinjalakkuda	Weaving and Mat-making
,, Parappukkara	Weaving
,, Lalithapuram	Weaving, Carpentry and Mat-making
,, Triprayar	Weaving
,, Anthikkad	do.
,, Tholur	Weaving and Carpentry
,, Cherpu	Weaving
,, Vadakkancheri	do.
,, Puduruthy	Weaving and Mat-making

Aided

St. Joseph's Industrial School, Chethikode	Weaving and Literary
Cochin School of Arts, Ernakulam	Painting, Design and Geometry
Abalasaranam Girls' Industrial School, Ernakulam	Needlework, Weaving Embroidery, Knitting, Crochet, Pillow lace, Kaikottikali and Ammanattom
Little Flower Industrial School, Chathyath	Weaving, Needlework, Embroidery, Crochet and Knitting
Chevaliar C. P. Luiz Memorial School, Perumanur	Weaving, Needlework, Embroidery, Knitting, Crochet and Literary
St. Sebastian's Industrial School, Palluruthy	Weaving, Needle work, Embroidery, Crochet, Knitting and Literary
St. Joseph's Industrial School, Karthedom	Weaving, Spinning, Coir works and Literary

Name of School **Aided**—(*contd.*)	*Name of subjects taught*
St. Antony's Orphanage, Puliyilakunnu	Weaving, Candlemaking, Rubber and Gardening
St. Little Teresa's Industrial School, Kodakara	Needlework, Embroidery, Crochet, Knitting and Weaving
St. Peter's Industrial School, Karuvannur	Weaving, Knitting, Needlework, Embroidery, Pillow lace and Crochet
St. Antony's H.M.R.I.S., Pazhuvil	Weaving, Needlework Embroidery, Pillow lace, Crochet and Knitting
St. Mary's Convent Industrial School, Ollur	Weaving, Needlework, Knitting, Crochet, Embroidery, Pillow lace, Socks and stockings and Literary
Pompie St. Mary's Orphanage, Trichur	Press, Carpentry and Arts Studio
St. Mary's Poor Industrial School, Thottanpetta	Weaving, Needlework, Embroidery, Crochet, Knitting, Pillow-lace and Literary
St. Anne's G.I.S., Trichur	Needlework, Embroidery, Crochet Knitting, Pillow lace, and Weaving
Industrial School, Arimpur	Weaving and Literary
S.R.K.G. Vidyamandiram, Vilangans	Weaving, Spinning and Khadi
St. Rita's Convent Industrial School, Perumpillisseri	Needlework, Embroidery, Knitting Crochet and Pillow lace
Ex-Maharaja's Memorial N.W. School, Kunnamkulam	do.
Needlework School, Palanji	Needlework, Embroidery, Knitting and Crochet

GOVERNMENT OF BOMBAY

DEPARTMENT OF TECHNICAL EDUCATION

ELPHINSTONE H. SCHOOL BLDGS.
3. CRUICKSHANK ROAD,
BOMBAY 1.

List of Approved Courses

Serial No.	Course of Instruction.	Standard of Admission.	Duration (years).	Minimum hours of instruction per week.	Nature of Award.
1	2	3	4	5	6
MECHANICAL ENGINEERING.					
1.	Automobile Engineering ...	Degree or Diploma in Mech. Eng. ...	½	33	Higher Diploma
2.	Mechanical Engineering ...	S. S. C. or equivalent ...	3	33	Diploma.
3.	Automobile Engineering ...	do ...	3	33	Dip. Tech. (Diploma).
4.	Internal Combustion Engineering	do ...	3	33	do
5.	Mechanical Draughtsman ...	do ...	2	33	Certificate.
6.	Workshop Apprentice Course ...	do ...	2	33	do
7.	Engineering Apprentice ...	do ...	2	5	do
8.	Mechanical Engineering ...	X or equivalent ...	3	33	do
9.	Automobile Engineering ...	do ...	3	33	do
10.	Internal Combustion Engineering	do ...	3	33	do
11.	Mechanical Apprentice ...	VIII ...	2	33	do
12.	Automobile Apprentice ...	VIII ...	2	33	do
13.	Motor Body Building and Upholstry ...	Carpentry 'A' II year ...	...	33	do

List of Approved Courses—*(contd.)*

Serial No.	Course of Instruction.	Standard of Admission.	Duration. (years).	Minimum hours of instruction per week.	Nature of Award.
1	2	3	4	5	6
14.	Boat Building ...	Carpentry 'A' II year ...	2	33	Certificate
15.	Internal Combustion Engineering Mechanic ...	IV ...	2	33	do
16.	Auto. Mechanic ...	IV ...	2	33	do
17.	Machinist ...	IV ...	2	33	do
18.	Fitter ...	IV ...	2	33	do
19.	Turner ...	IV ...	2	33	do
20.	Agricultural Carpentry and Smithy ...	Literate ...	2	33	do
21.	Pattern Making ...	do ...	2	33	do
22.	Cane work ...	do ...	2	33	do
CIVIL ENGINEERING AND ALLIED.					
23.	Civil Engineering ...	S.S.C. or equivalent ...	3	33	Diploma.
24.	Trained Maistry ...	Carpentry 'A' ...	1	33	Certificate.
25.	Carpentry 'A' ...	V ...	3	12	do
26.	Junior Carpentry ...	IV ...	2	33	do
27.	Carpentry 'B' ...	IV ...	3	12	do
28.	Carpentry 'C' ...	Literate ...	3	12	do
29.	Wood Turning and Lacquer Work	do ...	2	12	do

ELECTRICAL, RADIO AND ALLIED.

30.	Radio Engineering ...	Inter-Science (Group A)...	2	33	Diploma.
31.	Electrical Engineering ...	S. S. C. or equivalent ...	3	33	do
32.	Telecommunication Engineering	do ...	3	33	do
33.	Electrical Technology ...	do ...	3	33	Dip. Tech. (Diploma).
34.	Sound Engineering ...	do ...	2	33	Certificate.
35.	Radio Servicing ...	do ...	1	12	do
36.	Wireless Telegraphy ...	do ...	1	12	do
37.	Cine Projection ...	do ...	½	12	do
38.	Electrical Engineering ...	X ...	3	33	do
39.	Electricians ...	Wireman Apprentice ...	1 or ½	4 or 8	do
40.	Wireman Apprentice ...	Literate ...	½	4	do
41.	Electro-plating, Battery Charging	do ...	1	12	do

TEXTILE TRADES

42.	Textile Manufacture ...	S. S. C. or equivalent ...	3	33	Diploma.
43.	Textile Chemistry ...	do ...	4	33	do
44.	Textile Apprentice ...	do ...	2	5	Certificate.
45.	Cotton Spinning ...	X ...	2	30	Higher Certificate.
46.	Cotton Spinning ...	X ...	3	4½	do (Part-time).
47.	Cotton Weaving ...	X ...	3	30	Higher Certificate.
48.	Cotton Weaving ...	X ...	3	4½	do (Part-time).
49.	Handloom Weaving ...	IV ...	2	30	Certificate.
50.	Handloom Weaving ...	IV ...	4	8	do
51.	Cotton Weaving ...	IV ...	1	30	Lower Certificate.
52.	Cotton Weaving ...	IV ...	2	5	do

List of Approved Courses—*(contd.)*

Serial No.	Course of Instruction.	Standard of Admission.	Duration (years)	Minimum hours of instruction per week.	Nature of Award.
1	2	3	4	5	6
53.	Cotton Spinning ...	IV ...	2	5	do
54.	Wool knitting and Weaving ...	Literate ...	3	12	Certificate.
55.	Fibre Work ...	do ...	2	12	do
56.	Practical Weaving (Powerloom)...	do ...	½	30	do
APPLIED PHYSICS AND CHEMISTRY					
57.	Metallurgy ...	S. S. C. or equivalent ...	3	33	Diploma.
58.	Paints Technology ...	do ...	2	33	Dip. Tech. (Diploma).
59.	Advanced Leather Manufacture (Tanning) ...	do ...	2	33	do
60.	Photography ...	do ...	1	22	Certificate.
61.	Handmade Paper-making ...	IV ...	1	12	do
62.	Dyeing and Calico Printing ...	IV ...	2	12	do
63.	Artisans Leather Manufacture ...	Literate ...	1	33	do
64.	Oil, Soap and Paints Technology	S. S. C. or equivalent ...	3	45	Diploma.
65.	Oil and or Soap Technology ...	B.Sc. (Chem. Principal or B.Sc. (General with Chem., Physics and Maths.) ...	1	45	do
MISCELLANEOUS TRADES.					
66.	Advanced Leather Goods & Footwear Mfg. ...	S.S.C. or equivalent ...	2	33	Dip. Teeh. (Diploma).

67.	Typography ...	VII ...	3	12	Certificate.
68.	Sukanu (Quarter Master) ...	VII ...	2	33	do
69.	Sarang (Boatswain) ...	VII ...	2	33	do
70.	Khalasi (Sailor) ...	VII ...	1	33	do
71.	Teacher's Course in Tailoring ...	Ladies Tailoring, and P.S.L.C. exam. pass ...	1	20	Diploma.
72.	Teachers Course in Embroidery...	P.S.L.C. exam. pass and Embroidery and Fancy Work ...	1	20	do
73.	Practical Tailoring ...	IV ...	3	12	Certificate.
74.	Industrial Leather Goods Mfg. ...	IV ...	1	33	do
75.	Artisan's Foot-wear Mfg. ...	Literate ...	2	33	do
76.	Artisan's Miscellaneous Leather Goods Mfg. ...	do ...	2	33	do
77.	Tailoring and Cutting ...	do ...	1	33	do
78.	(*a*) Ladies Tailoring ...	Primary IV ...	1	24	do
	(*b*) Do. ...	do ...	2	12	do
	(*c*) Practical Ladies Tailoring ...	Literate ...	1	24	do
	(*d*) Do. do. ...	do ...	2	12	do
79.	Embroidery—Hand and Machine	do ...	1	9	do
80.	Hand Embroidery and Fancy work ...	do ...	1	9	do
81.	Pottery Making ...	do ...	2	12	do.
82.	Master Tailor Dip. Course ...	P.S.L. Cert. exam. and Tailoring and Cutting Exam. pass. ...	1	18	Diploma.

List of Technical & Industrial Institutions in Bihar.

Sl. No.	Name of Institution.	Subject & Period of education	Minimum qualification for admission.
1	2	3	4
1.	Bihar College of Engineering, Patna.	1. Civil Engineering Degree 4 years College Course plus 1 year practical training under the Patna University for I. Sc. (Eng.) & B. Sc. (Eng.) Degree.	I. Sc.
		2. Civil Engineering Subordinate 3 years College course plus 1 year practical training Civil Engineering subordinate. Diploma is granted by the Board of Examination.	Matriculates.
		3. Industrial Diploma 5 years course of practical training in the following trades along with theoritical training. (a) Carpenter's Shop. (b) Pattern Maker's shop, (c) Moulder's Shop. (d) Smithy. (e) Fitting. (f) Machine Shop. (g) Garage. (h) Power House. (i) Painter's Shop. (j) Electrical Shop.	Middle Eng. Standard.

Certificates awarded are:—

(1) An Industrial Diploma to those who complete the full theoritical course and craftsmanship test at the end of the course and statisfy examiner both in theory and craftmanship test at the end of the course.

(2) A charge hand's certificate to those who complete the first three year's theoritical course and satisfy the craftsmanship test.

(3) A January Man's certificate to those who only satisfy the craftsmanship test.

Government Institutions:—

2. Ranchi Technical School, Ranchi.	(1) Industrial Diploma course (The same as in the Bihar College of Engineering Vide No. 1(3).	Middle Eng. Standard.
	(2) Leather workes class — Two years' training in boot & other leather goods manufacture.	Upper Primary.
3. Tirhut School of Engineering, Muzafferpur.	Subordinate Civil Engineering. 40 Seats of Mechanical & Electrical. Engineering and 20 for Civil Engineering. Three years Course.	Matriculation.
4. Bihar Institute of Technology, Sindri.	Degree course in Mechanical & Electrical Engineering. Four years college course plus one year Practical Training affiliated to the Bihar University.	I. Sc.

List of Technical & Industrial Institutions in Bihar.—*(contd.)*

Sl. No.	Name of Instituition	Subject & Period of education.	Minimum qualification for admission.
1	2	3	4
5.	Central Technological Institute, Gulzarbagh.	Cotton Weaving. 2 years. Dyeing & Calico. 2 Years. Printing. 2 Years. Tailoring. 1 Year. Pottery. 1 Year. Basket & Cane, Furniture making. 1 Year. Knitting. 1 Year. Carpet weaving. 1 Year. Durrie weaving. 1 Year. Newar & tape weaving. 1 Year. Toy making laquet. 1 Year. Toy making wooden. 1 Year. Toy making cardboard 1 Year.	Middle Standard.
6.	Wool Weaving Institute, attached to Central Tech. Institute, Gulzarbagh.	Weaving of blankets, lohis, Warm Coatings and Shirting Two year's course.	Primary usually candidates are admitted.
7.	Silk Institute, Bhagalpur.	(1) Silk weaving, reeling and spinning.	Preference is given to those who belong to weavers class and possess land.

		(2) Dyeing & Silk Printing. (3) Silk Throwing & Weaving. The period of training is one year in all sections.	
8.	Dehri Technical School, Dehri.	Industrial Diploma course (The same as in the Bihar College of Engineering vide No. 3).	Middle English.
9.	Halftime Weaving School, Biharsharif.	General Education upto Middle English standard along with four years' training in weaving of cotton goods.	
10	Evening Mining Classes, Jharia, Sijua.	Three years theoritical training in Mine Manager's certificate course to the Mining apprentices in coal mines.	Matriculates.
11	Industrial Chemistry Classes, Science College, Patna.	1. One year training in the manufacture of (a) Washing & Toilet soaps (b) cosmetics (c) Disinfectants. (d) Leather dressing & Boot polishes.	Matriculate or its equivalent.
		2. Research training	M. Sc.
12.	Technical Classes attached to Govt. Press, Gulzarbagh,	Composing 2 Years. Letter press printing 2 Years. Book Binding 2 Years.	Matriculate or equivalent. Working Knowledge of English.
13.	Provincial Industrial Research Laboratory, Science College, Patna.	Research work in Industrial Chemistry.	Middle standard.

List of Technical & Industrial Institutions in Bihar—*(contd.)*

S. No.	Name of Institution.	Subject & Period of education.	Minimum qualification for admission.
1	2	3	4
14.	School of Home Industries for Women & Girls (Two School).	Total period of training is one year, Subjects taught are (a) Tailoring. (b) Sewing. (c) Embroidery. (d) Basketry. (e) Spinning.	Middle Standard.
Aided by Government.			
15.	Mahila Shilpa Kala Bhawan, Muzafferpur.	The same as No. 23 Industrial training is given in Tailoring, Knitting, Embroidery, Weaving.	Primarily meant for ladies & girls.
16.	Aghore Kamini Shilpalaya, Patna.	Carpet weaving 2 Years. Tailoring. ,, Needle & leather work. ,, Autoknitting. ,, Hand knitting. 1 Year. Basket Work. ,, General Education. ,,	do
17.	Girls' Tailoring, Khunti School (Ranchi)	Tailoring 2 Years Weaving. 1 Year.	do

18.	Girls' Weaving Tailoring School, Rengarih.	Weaving Tailoring.	1 Year. 2 Years.	do
19.	Mahila Shilpa Vidyalaya, Chapra, Saran.	Tailoring Knitting. Embroidery. Carpet weaving,	2 Years 1 Year. ,, ,,	Meant for ladies and girls.
20.	Arrah Industrial School, Arrah.	Weaving and Dyeing,	1 Year.	Primary.
21.	Theosophical Harijan Industrial School, Patna.	Weaving Tailoring Carpentry. Literary education.	1 Year ,, ,,	Meant for Harijan Boys but others are also admitted.
22.	Orphanage Anjuman Khadimul-Islam, Halftime Industrial School, Patna City.	The same as No. 23 Industrial training is given in the following: Weaving, Tailoring, Leather Works.		Meant for Muslim Orphanage and also day scholars.
23.	Industrial School attached to Home for the Homeless, Muzafferpur.	Weaving and Spinning, Carpentry, General Education, Training given till proficiency.		Meant for destitutes admitted into the Home & also day scholars.
24.	Katkahi Technical School, Katkahi (Ranchi)	Carpentry. Weaving.	2 Years. 3 Years.	Meant for aboriginal boys.
25.	Bihar Vidyapith Sadawuat Ashram, Patna.	(1) Hand spinning. (2) Hand weaving. (3) Bee Keeping. (4) Palmgur manufacture. (5) Oil pressing. (6) Agriculture. Classes in Economics ; Politics ; Civics and Gandhian literature.		Meant for aboriginal boys.

List of Technical & Industrial Institutions in Bihar—*(contd.)*

S. No.	Name of Institution.	Subject & Period of education.	Minimum qualification for admission.
1	2	3	4
26.	Jamalpur Technical School, Eastern Railway, Jamalpur.	Apprentice course of 5 years' duration Mechanic. Training is given in Mechanical, Electrical & operating Departments of the Railway Work Shop. One third seats for Indians is reserved for Bihari.	Matriculate.
27.	St. Rita's Knitting School, Bettiah.	Complete course of Knitting and sewing both by hand and on machine is offered. Total period is three years.	Open to all widows & girl & Married women.
28.	Bengarai Industrial School, Bengaria (S.P.)	Carpentry 3 Years. Weaving. 2 Years.	Specially meant for Santhals but others also are admitted.
29.	Khunti Co-operative Home Industries Association Ltd., Weaving School, Khunti (Ranchi)	Manufacture of cotton goods on hand loom. Total period of training 2 Years in weaving & dyeing.	Aborginals are admitted.
30.	Lady Hallet Rural Welfare Institute for Girls Weaving School, Ranchi.	One year training in weaving. Two year's training in tailoring.	do do
31.	Technical Institute, Monghyr.	Vocational training combined with general education is provided. Four years course upto Middle English Standard and Industral training in	Primary.

		(1) Tailoring & Cutting. (2) Carpentry. (3) Smithy.	
32.	Theosophical Model Half-time Industrial School, Gaya.	The same as No. 23. Industrial training is given in tailoring and weaving.	Primary.
33.	B.N. Mullick Industrial School, Rayan, Darbhanga.	Weaving of Durris and Newar are taught to the registered member of the criminal tribes Maghy Dusad of the locality.	,,
34.	Shri Tilak Kala Vidyalya, Madhupur (S.P.)	General education upto class VI ; Training in vocational trade, Carding, Spinning, Weaving and Tailoring. Spinning is compulsory for all the students from III to VI. Weaving and Tailoring to class V and VI only.	
35.	Mahilla Charkha Mandir, Ranchi.	Spinning, Weaving, Adult Education and Tailoring Class.	,,
36.	Mahilla Charkha Class, Kadamkuan, Patna.	do	,,
37.	Bapu Smarath Mahila Charkha Class, Patna.	do	,,
38.	Mahila Vidya Kala Bhawan, Kadam Kuan, Patna.	do	,,

List of Technical and Industrial Schools and Colleges in Madhya Pradesh, recognised by Government.

S. No.

1. Government School of Handicrafts, Nagpur.
2. Government School of Handicrafts, Akola.
3. Robertson Industrial School, Jabalpur.
4. Government Technical School, Raipur.
5. Government Aided Carpentry School attached to the Berar Victoria Memorial Technical Institute, Amravati.
6. Government Aided Municipal Industrial School, attached to the Tilak National School, Akola.
7. Government Aided Municipal Industrial School, Khandwa.
8. Government Aided Janpad Carpentry School, Buldhana.
9. Government Aided Municipal Industrial School, Sagar.
10. Government Aided Industrial School, Chandametta. P.O. Raracia, (District Chhindwara).
11. Leather Tanning School, Nagpur.
12. Government Manual Training Centre attached to State Boys High School, Khairagarh.
13. Industrial Institute for the Deaf, Dumb and the Blind, Nagpur.
14. Reformatory School, Jabalpur.
15. Government Technical High School (Kala Niketan), Jabalpur.
16. Seva Samaj Vocational Training School for Women, Jabalpur.
17. Bhonsla Deaf, Dumb, and Blind Boys' Institute, Nagpur.
18. Government Science Core High School, Amravati.
19. Government Engineering School, Nagpur.
20. Government Engineering College, Jabalpur.
21. Laxminarayan Technological Institute, Nagpur.
22. Nagpur School of Arts, Nagpur.
23. Blind Boys' Institute, Nagpur.

List of Technical and Industrial Schools in Madhya Pradesh and Berar and the Courses taught

S. No.	Name of School	No. of Sanctioned seats	Courses	Duration of Courses
1	2	3	4	5
1.	Govt. School of Handicrafts, Nagpur	45	(1) Carpentry.	3 years.
		45	(2) Blacksmithy.	do
		15	(3) Leather Work.	do
		15	(4) Tailoring.	2 years.

List of Technical and Industrial Schools in Madhya Pradesh and Berar and the Courses taught—*(contd.)*

S. No.	Name of School	No. of Sanctioned seats	Courses	Duration of Courses
1	2	3	4	5
2.	Govt. School of Handicrafts, Akola.	40	(1) Carpentry.	3 years.
		40	(2) Blacksmithy.	do
		15	(3) Tailoring.	2 years.
		12	(4) Cotton Weaving & Testing.	1 year.
		12	(5) Carpet, Durrie & Newar making.	do
		12	(6) Toy making and Lacquer Work.	do
		12	(7) Cane & Basketry.	do
3.	Robertson Industrial School, Jabalpur.	60	(1) Carpentry.	3 years.
		54	(2) Blacksmithy.	do
		12	(3) Cotton Weaving & Testing.	1 year.
		12	(4) Carpet, Durrie & Newar making.	do
		12	(5) Toy making and Lacquer Work.	do
		12	(6) Cane & Basketry.	do
4.	Govt. Technical School, Raipur.	43	(1) Carpentry.	3 years.
		30	(2) Blacksmithy.	do
		15	(3) Leather Work.	do
		30	(4) Tailoring.	2 years.
5.	Govt. Industrial School, Amravati.	60	(1) Carpentry.	3 years.
			(2) Blacksmithy.	do
6.	Govt. Aided Industrial School, Akola.	15	(1) Carpentry.	3 years.
		15	(2) Blacksmithy.	do
7.	Govt. Aided Muncipal Industrial School, Khandwa.	15	(1) Carpentry.	3 years,
		15	(2) Blacksmithy.	do
8.	Govt. Aided Janpada Sabha Carpentry School, Buldana.	15	(1) Carpentry.	3 years.
9.	Govt. Aided Municipal Industrial School, Saugor.	15	(1) Carpentry.	3 years.
10.	Govt. Aided Industrial School, Chandametta (District Chindwara)	21	(2) Blacksmithy.	3 years.

Note Regarding work of Technical Institutions of the Industries Department of Mysore.

There are 10 Industrial Schools of which one is a major Institute viz., the Chamarajendra Technical Institute, Mysore. The subjects taught in the other Industrial Schools are :

1. Carpentry,
2. Smithy,
3. Fitting,
4. Machine shop,
5. Cotton and Wool Weaving,
6. Rattan,
7. Lacquerware,
8. Sandalwood and Ivory Carving,

the duration of each course being 3 years. The average annual attendence and the average number of students that qualify annually in the above ten institutions are 750 and 256 respectively.

The indigeneous crafts of the State are cotton and wool weaving, wood-carving, metal work and lacquerware manufacture.

Some of the special steps that are being taken in the State, to promote arts and crafts activities are (1) the award of stipends to the students during their training period, (2) supply of tools and raw materials required for training free of cost, (3) engaging passed students of the Schools on production work in some of the institutions and paying them suitable wages, thus providing a means of employment to them, (4) giving loans to the passed Students for the purchase of raw materials and tools to enable them to make an independent living, (5) arranging show-rooms at important places for the display and sales of the finished products of these institutions and also of the private artisans with a view to find sale for their finished goods, (6) holding of exhibitions at several important places from time to time with the same view.

The Chamarajendra Technical Institute, Mysore, and other Industrial Schools of the Department have Advisory Committees consisting of official and non-official members to advise them from time to time regarding the promotion of their activities. There is one Museum in Bangalore of a general type and one in Mysore connected with the display of Cottage Industries besides an Arts Gallery in Mysore. These institutions are helpful for the promotion of Arts and culture.

List of Technical Institutions in Hyderabad State.

Name of Institution & Courses taught	Minimum qualification for admission	Duration
1	2	3
1. *Osmania Technical College.*		
1. Mechanical and Electrical Diploma L. M. E. E. ...	Matric or H. S. C.	4 years.
2. Railway 'A' Grade Course	Matric or H. S. C.	3 years.
3. Electrical Trades Course	Middle or Lower Secondary pass.	3 years.
4. Railway 'B' Grade Course	Middle or Lower Secondary pass.	3 years.
5. Manual Instructors' Training Course for Teachers of the Department of Public Instruction ...		1 year.
2. *Central School of Art and Crafts.*		
1. Intermediate Certificate Course in Crafts (Weaving or Woodwork or Metal work)	Middle or Lower Secondary pass.	3 years.
2. Intermediate Certificate Course in Art (Drawing and Painting or Clay Modelling and Sculpture) One of the following is taken as an optional subject in the Intermediate Course in Art:—	Middle or Lower Secondary pass.	3 years.
1. Commercial Art & Lithography.		
2. Clay Modelling.		
3. Dyeing and Printing.		
4. Pottery.		
5. Fancy Leather Work.		
6. Colour Technology.		
7. Photography.		

List of Technical Institutions in Hyderabad State.—*(contd.)*

Name of Institution & Courses taught	Minimum qualification for admission	Duration
1	2	3
3. Diploma Course in Art (Drawing and Painting) ...	Intermediate Certificate in Art.	3 years.
4. Diploma Course in Art (Clay Modelling and Sculpture)	Intermediate Certificate in Art.	2 years.
5. Diploma Course in Cabinet making	Intermediate Certificate in Craft (Woodwork).	2 years.
6. Special Courses in the following subjects:— ...		1 year each.
1. Architectural Draftsman Course (Post-matriculation).		
2. Clay Modelling and Sculpture.		
3. Dyeing and Printing.		
4. Commercial Art.		
5. Pottery.		
6. Colour Technology.		
7. Fancy Leather work.		
8. Woodwork or Weaving or Metal work.		
9. Photography.		
3. Central School of Commerce and Secretarial Training.		
1. Commercial Diploma	Matric or H. S. C.	2 years.
2. Banking Diploma	do do	do
3. English Secretarial Certificate	do do	do
4. Urdu Secretarial Certificate	do do	do

Part-time Classes.	Matric or H. S. C.	1 year.
5. English Shorthand	do do	
6. English Type-writing	do do	
7. Urdu Shorthand	do do	
8. Urdu Type-writing	do do	
9. Book-keeping	do do	
10. Correspondence	do do	
4. Agricultural School, Parbhani.		
Certificate of proficiency in Agriculture ...	Middle or Lower Secondary pass.	2 years.
Subject:—		
1. Agriculture (inclusive of Agronomy and Farm Machinery).		
2. Horticulture.		
3. Elementary Botany & Chemistry.		
4. Entomology and Mycology.		
5. Animal Husbandry and Dairying.		
6. Agricultural Economics.		
7. English (Non-detailed study).		
Short courses for specialised training in Horticulture, Dairying, Poultry, Farming and Agricultural Machinery, (not yet started),		
5 & 6. Boys Technical High Schools, Aurangabad and Warangal.		
Mechanical and Electrical Trades Course (until 1358 F.)	Middle or Lower Secondary pass.	3 years.

List of Technical Institutions in Hyderabad State—*(contd.)*

Name of Institution & Courses taught	Minimum qualification for admission	Duration
1	2	3
Higher Secondary (Technical) Certificate from 1359 Fasli.	Middle or Lower Secondary pass.	3 years.
7 & 8. *Girls Vocational High School, Beroom and Anderoon-e-Balda.*		
Lower School Certificate in Domestic Science ...	Primary pass.	2 years.
Higher School Certificate in Domestic Science ...	Middle or Lower Secondary pass.	2 years.

Subjects:—

Theory:—

1. House craft & Laundry work.
2. Cookery and Dietetics.
3. Mothercraft and Hygiene.
4. Plain sewing, Tailoring and Embroidery.
5. Elementary Science.

Practical:—

1. Plain sewing and Tailoring.
2. Embroidery & Knitting.
3. House Craft and Laundry work.
4. Cookery.
5. Mothercraft.
6. Optional papers (2).
7. Drawing.

Special courses in either of the following three groups:— (*a*) Fancy Stitching, Canework, Knitting. (*b*) Needle work, Tailoring, Banjara Art, Knitting. (*c*) Special Cookery, Dyeing & Printing, Knitting & Plain Sewing.		1 year.
9 to 21. Boys Industrial Schools. Hyderabad, Nizamabad, Gulbarga, Nanded, Bid, Bidar, Jalna, Karimnagar, Nirmal, Raichur and Parbhani.		
Subjects:—		
Carpentary, Canework, Weaving (Banares, Pattan, Himroo Mashroo, Silk), Blacksmithy, Fitting, Tailoring, Carpet-weaving, Electroplating, Cement work, Bidri works, Nirmal work, Karimnagar Silver filigree work.	Pirmary pass	2 or 3 years.
Special course in Gem-cutting in Central Boys Industrial School, Balda upto the end of Ardibehisht 1357 Fasli.		
22 to 25. Girls Industrial Schools, Nizamabad, Gulbarga, Warangal and Aurangabad.		
Lower School Certificate in Domestic Science ...	Primary pass.	2 years.
(The same subjects as for Higher Course except Elementary Science subsituted by Arithmetic.)		
Short Courses:— 1. Flower making and Toy-making. 2. Knitting.		

List of Technical Institutions in Hyderabad State—*(contd.)*

Name of Institution & Courses taught	Minimum qualification for admission	Duration
1	2	3
3. Raffia work.		
4. Cookery.		
5. Fancy Stitching.		
26. *Technical Training Centre, Kachiguda, Hyderabad (for Resettlement Training).*		
Fitting, Turning, Moulding, Motor Mechanics, Machinists, Blacksmiths, Wiremen, Electricians, Welding Carpentry, Tinsmithy.		
Domestic Science Training College, Hyderabad Dn. (Home Science Teachers Diploma).	Matric.	3 years.
School of Music & Dance, Hyderabad Dn.	Read and write Mother tongue (regional language).	3 years.
(Certificate in either Karnatak or Hindustani Music (vocal or instrumental) Bharat Natyam and Kathak Dance.)		
27. *Boys' Technical High School, Secunderabad.*		
. Higher Secondary (Technical) Certificate.	Middle or Lower Secondary pass.	3 years.
The cottage Industries Institute, Mashirabad Road, Hyderabad, Deccan,		
has the following Courses for literates. They are artisan courses.		
1. Weaving.		1 year.
2. Dyeing and calico Printing.		1 year.

3. Knitting and Hosiery Manufacture.	1 year.
4. Durrie and carpet weaving.	1 year.
5. Wollen Sqirning and Carpet Weaving.	2 years.
6. Embroidery and Needle work.	1 year.
7. Ratan and Basket Making.	1 year.
8. Toy making and lacquer-work.	1 year.
9. Work Shop including Carpentry and Smithy.	1 year.

Technical Courses and Institutions in Punjab

Statement showing the names of institutions under the Industries Department with Crafts etc. taught therein, minimum educational qualifications for admission and the dates of admission.

Serial No.	Name of Institution	Crafts or trades taught	Length of course	Minimum educational qualifications required.	Dates of admision
1	2	3	4	5	6
1.	Government Institute of Dyeing & Calico Printing, Ludhiana.	Dyeing & Calico Printing.		1. Matriculation of the Punjab University or equivalent qualifications. Preferably with science.	
		1. Foreman Dyers Class	2½ years		
		2. Artisan Dyeing Class	1½ years		

Technical Courses and Institutions in Punjab—*(contd.)*

Serial No.	Name of Institution	Crafts or trades taught	Length of course.	Minimum educational qualifications required	Date of admission
1	2	3	4	5	6
		3. Calico Printing Class.	1½ years	2. & 3. Artisans, *e.g.* Calico Printers, Dyers, Weavers, and others connected with the dyeing printing or weaving industry or other all having knowledge of 3 R's.	Before the summer vacation from 15th June to 15th July, and one month after.
2.	Punjab Institute of Textile Technology, Amritsar.	Textile Technology.			
		1. Higher Class	3 years	1. Matriculation of the Punjab University or equivalent qualifications.	1st September.
		2. Artisan Class	1 year	2. Weavers artisans or persons engaged in the trade.	1st September.
3.	Government Hosiery Institute, Ludhiana.	Hosiery			
		1. A Class	2 years	1. Matriculation of the Punjab University or equivalent qualifications.	
		2. B Class	1 year	2. Artisans and others	
		3. Workmasters Class	1 year	3. Direct admission to this class is not made. Four best students who have passed the B Class examination are admitted to this class for further intensive training.	From middle of June.

4.	Government Wood Working Institute, Jullundur. City.	Theoretical & practical training in woodwork by modern methods including the use of the latest power driven machinery.			
	Two Courses are provided.				
		1. Main course	4 years.	Vernacular or Anglo-vernacular Middle, Preference is given to Matriculates who took Drawing in the Matriculation or School Leaving Certificate Examination and possess some knowledge of woodwork such as is given in manual training centres of the Education Department or to those who are hereditary woodworkers. Students who have passed the Final Examination of Industrial Schools Type I or Type II with woodwork as their craft are admitted direct to second or third year classes according to their individual capacity.	1st April to 31st May.

Technical Courses and Institutions in Punjab—*(contd.)*

Serial No.	Name of Institution.	Crafts or trades taught.	Length of course.	Minimum educational qualifications required.	Dates of admission
1	2	3	4	5	6
		2. Special Artisan Course in Machine Work and Machine Shop Practice.	1 year	Persons already in the wood-working trade who desire to improve their general trade knowledge are eligible for admission.	
5.	Government Technical Institute, Ambala City.	Theoretical and practical training in metal work by modern methods, including the use of power machines and mechanical drawing.	4 years	Matriculate	1st June to 31st July.

	The Practical course aims at the production of pumps, internal combustion engines and other allied objects and covers training in pattern making, forging and welding, fitting, turning, machining, erection, finishing, and reconditioning and repairing of automobiles.	4 years	Matriculate	1st June to 31st July.
6. Government Tanning Institute, Jullundur City.	(i) Leather Chemistry & Technology "A" Class	3 years	Matriculation	1st week of June.
	(ii) Artisan Class "B" Class	2 years	Harijans	1st week of October.
7. Moolchand Government Industrial School, Ambala Cantonment.	1. Brass casting & utensil making.	3 years	Primary passed boys are eligible, Preference is, however, given to middle pass boys.	1st April to 31st May,
	2. Smithy	2 years	Middle passed boys are admitted. Primary passed over 14 years are also admitted.	

Technical Courses and Institutions in Punjab—*(contd.)*

Serial No.	Name of Institution.	Crafts or trades taught	Length of course.	Minimum educational qualification required.	Date of admission.
1	2	3	4	5	6
8.	Government Industrial School Amritsar.	Tailoring & Cutting.	3 years	Matriculates or literate hereditary tailors are eligible for admission.	Admission throughout the year when ever there is a vacancy.
9.	Government Industrial School, Ferozepore.	Urban Cottage industries in wood and metal.	3 years	Vernacular Middle pass.	1st April to 31st May.
10.	Government Industrial School, Hoshiarpur.	1. Weaving (art silk & mixture Weaving).	3 years	Literate persons are eligible for admission, but preference is given to literate hereditary or professional weavers.	April & October every year.
		2. Carpentry	2 years	Vernacular Final Examination pass.	1st April to 31st May.
11.	Government Industrial School, Kulu.	Wool Spinning & Wool Weaving	1½ years	Must possess knowledge of the local methods of weaving. Literate weavers are given preference.	January & July every year.
12.	Institute for Hosiery Machine Building, Ludhiana.	Hosiery Machine Building.	3 years	Vernacular Final Certificate Students have first to spend one year in the preparatory class.	1st April to 31st May.

		2. Carpentry.	2 years	Vernacular or Anglo Vernacular Middle Pass.	
		3. Smithy.	2 years	do	
13.	Government Industrial School, Rewari.	Leather Work	2 years	Primary passed Boys are eligible for admission	1st April to 31st May.
14.	Government Industrial School, Rohtak.	1. Cotton weaving	2 years	Vernacular Final Examination pass. Hereditary weavers are given preference.	April & October every year.
		2. Carpentry	2 years	Vernacular or Anglo	1st April 31st May.
		3. Smithy	2 years	Vernacular Middle pass and Lower middle pass if vernacular and Anglo vernacular middle pass are not forthcoming.	
15.	Government Industrial School, Panipat.	1. Wool Spining and Wool Weaving.	3 years	Vernacular Final Examination pass. Preference is given to hereditary weavers Literate adult weavers are eligible for admission even without the Vernacular Final Certificate. Illiterate skilled weavers are eligible for admission if literate skilled weavers are not forthcoming for admission.	1st April to 31st May.
16.	Government Industrial School, Hissar.	1. Wool spinning & Wool Weaving	18 months	Literate hereditary weavers or their boys are given preference.	1st April & October every year.

Technical Courses and Institutions in Punjab—*(contd.)*

Serial No.	Name of Institution.	Crafts or trades taught.	Length of course.	Minimum educational qualifications required.	Date of admission.
1	2	3	4	5	6
		2. Carpet Weaving.	18 months		
17.	Government School of Arts, Punjab, Simla.	Arts & Crafts	3 years	Matric or equivalent.	1st July to August.
18.	Government Central Pottery Agency, Ambala Cantt.	Pottery.	36 months.	Matric or equivalent.	1st April to 31st May.
19.	Surgical Instruments Centre and Development Laboratory, Sonepat.	Surgical Instrument	36 months.	Matric or equivalent,	1st October, to 31st October,

List of privately organised Vocational or Technical Training Institutes for the Boys in the Punjab.

Name and Addresses of the Institutes.	*Subject Taught.*
1. Mission Industrial School Gurgaon.	General Education upto VIII Middle Standard, Carpentry, Shoe Making.
2. National Institute of Engineering, Hoshiarpur.	Electrical, Machanical & Radio Mechanics courses.
3. Institute for the Blind, Amritsar.	Basket Making, Caning of Chairs, Charpai weaving, beside General elementary education in braille system.
4. Shri Kishan Chander Industrial School, Tarn Taran (District Amritsar).	General Education upto middle standard and weaving.
5. Vidya Pracharani Sabha, Hissar.	Formerly used to impart training in spinning, cotton weaving, carpet weaving, besides general education upto the middle standard.
6. Engineering College, Ludhiana.	Certificate course in Electrical Mechanical & Draftsman class and Civil Engineering.
7. Technological Institute of Textiles, Bhiwani.	Textile Engineering.
8. Dayanand Industrial School, Jullundur.	Carpentry, Brick layers building construction, sportsgoods, sports leather suitcase making.
9. Dayanand Polytechnic, Amritsar.	Blacksmithy, Carpentry, lineman & Wiremen, mechanist, General Mechanics, Mechanics (Instruments), Motor Mechanics, Moulders, Plumbers, Radio Servicing, turners welders, Bleaching & Dyeing & Calio Printing, Hand Weaving, Book Binding, Cutting and tailoring,
10. Dayanand Industrial School, Ambala City.	Cutting & Tailoring, Dyeing and Calico, Bleaching, Manufacture of footwear, Manufacture of suitcase.

Madhya Bharat

LIST OF COTTAGE INDUSTRIES TRAINING-*cum*-PRODUCTION CENTRES.

Serial No.	Industries.	No. of Craft.	No. of trainees	Remarks.
1	2	3	4	5
1.	Hand Loom	13	82	As detailed in statement II.
2.	Wool Weaving	2	...	do.
3.	Palm Gur	5	46	do.
4.	Sericulture	1	10	do.
5.	Tanning	2	12	do.
6.	Leather Stitching	3	36	do.
7.	Oil Pressing	3	...	do.
8.	Leather Toy Making	1	14	do.
9.	Industrial Workshop	1	30	do.
10.	Carpentry	2	12	do.

Besides the above, the Department runs 4 Khadi Production Centres in Chachabra, Shivpuri, Sheopur and Mandsaur, which provide work to local spinners and weavers and a Lacquer Ware Centre at Gwalior which aims at organizing the lacquer-ware workers into co-operative societies and help them to produce better varieties of lacquer products with improved equipment.

Details regarding Cottage Industry training-cum-Production Centres under the Directorate of Industries and Commerce, Madhya Bharat, Indore.

S. No.	Subject.	Name of the Centre.	Place.	Subject taught.	No. of trainees admitted.	Length of Course.	Remarks.
1	2	3	4	5	6	7	8
1.	Handloom	(1) Chanderi Textile	Chanderi	Fine count weaving with excellent designs.	25	2 years	This is a Centre where fabrics of the most delicate texture are woven.
		(2) Govt. Handloom Weaving Demonstration Centre.	Maheshwar.	do	10	1 year.	do
		(3) Refugee Handloom Weaving Centre.	Indore.	Rough count weaving of utility clothes of various colours designs.	...	do	Weaving of towels, Table cloths etc.
		(4) do	Gwalior.	do	...	do	do
		(5) Adivasi Handloom Weaving Centre.	Bagh.	Rough count weaving of utility cloth.	20	6 months	Trainees are paid stipends @ Rs 15 p.m. each.
		(6) do	Jobat.	do	20	do	do
		(7) do	Sailana.	do	...	...	do
		(8) do	Mandu.	do	...	...	do

Details regarding Cottage Industry training-cum-Production Centres under the Directorate of Industries and Commerce, Madhya Bharat, Indore.—*(contd).*

S. No.	Subject.	Name of the Centre.	Place.	Subject taught.	No. of trainees admitted.	Length of Course.	Remarks.
1	2	3	4	5	6	7	8
		(9) Handloom Centres for Weavers in Non-Adivasi Area.	Mandsaur.	Introducing improved methods and popular varieties among weavers.	...		
		(10) do	Shivapuri.	...			
		(11) do	Ratlam.	...			
		(12) do	Barwani.	...			
		(13) do	Bhander.	...			
2.	Wool Weaving.	(1) Kambal Utpatti Kendra.	Mandsaur.	Wool weaving with improved equipment.	...	...	These centres are more or less production centres run for the benefit of wool weavers. Training in improved methods of production is also imparted to the willing weavers.
		(2) Govt. Blanket Factory.	Manasa.	do	...	...	

3. Palm Gur.	(1) Adiwasi Palm Gur Training Centre.	Gahnda-wani.	Tapping of the palms and manufacture of Palm Gur.	10	4 months	Trainees are given stipends @ Rs. 25 p.m. each.
	(2) do	Khargone.	do	10	do	do
	(3) do	Phata.	do	10	do	do
	(4) do	Barwet.	do	10	do	do
	(5) do	Chandpur.	do	10	do	do
4. Sericulture.	Central Silk Farm.	Yeshavant Sagar.	Mulberry plantation and rearing of silk worm.	...	6 months	
5. Tanning.	(1) Dewas Tannery.	Dewas.	Improved methods of Pit tanning.	12	6 months	Trainees are given stipends @ Rs. 15 p.m. each.
	(2) Narsingarh Tanning.	Narsingarh.	do	...		Tanners bring their own hide sand tan them under the guidance of the Supervisor of Tanning.
6. Leather Stitching.	(1) Leather Stitching Centre.	Dewas.	Stitching of all kinds of foot wears.	12	1 year.	Trainees are given stipends @ Rs. 25 p.m. each.
	(2) do	Shivpuri.	do	12	do	do
	(3) do	Agar.	do	12	do	do

Details regarding Cottage Industry Training-cum-Production Centres under the Directorate of Industries and Commerce, Madhya Bharat, Indore.—*(contd.)*

S. No.	Subject.	Name of the Centre.	Place.	Subject taught.	No. of trainees admitted.	Length of Course	Remarks.
1	2	3	4	5	6	7	8
7.	Village Oil Crushing.	(1) Village Oil Pressing Centre.	Karera.	Oil crushing from the improved type of Ghana.	...	5 months	
		(2) do	Gohad.	do	...	do	
		(3) do	Jora.	do	...	do	
8.	Leather Toy making.	Leather Toy making Centre.	Indore.	Making of leathers toy in real skin, representing various poses of animals.	15	3 months	The trainees are given stipends @ Rs. 15 p.m. each.
9.	Industrial Workshop	Refugee Industrial Workshop.	Indore.	(1) Foundry (moulding)	14	1 year.	Trainees are given stipends @ Rs. 30 p.m. each.
				(2) Fitting	14	do	do
				(3) Turning.	8	do	do
				(4) Black Smithy.	4	do	do
				(5) Welding.	4	do	bo
				(6) Pattern making.	6	do	do

10. Carpentry	(1) Cabinet Making Centre.	Indore.	...	20	3 years.	The Centre is being developed on the lines of Junior wood-working class in U. P.
"	(2) Carpentry Centre at Bhilsa.	Bhilsa	...	7		do

'List of Government aided Technical & Industrial Institutions in Uttar Pradesh'.

Serial No.	Name of Institution & Its Location		Subjects taught	Duration of course.	Admission Qualification required.	Designation of the Head of the Institution.
1	Location.	2 Name.	3	4	5	6
1.	Allahabad.	Harijan Ashram.	Basket-making Tanning, Iron Work.	1 year.	Able to read & write.	Hony. Secretary.
2.	"	Municipal Leather Working School.	Leather Works.	2 years.	Upto VIII Standard.	Principal.
3.	"	Municipal Mahila Shilp Bhawan.	Knitting, Leather Works, Book-binding.	2 years.	Upto VIII Standard.	Chairman.
4.	"	U. P. Deaf & Dumb Institution.	Printing.	3 years.	Able to read & write.	Manager.

'List of Government aided Technical & Industrial Institutions in Uttar Pradesh'—*(contd.)*

Serial No.	Name of Institution & Its Location		Subjects taught	Duration of course.	Admission Qualification required.	Designation of the Head of the Institution.
1	2		3	4	5	6
	Location.	Name.				
5.	Agra.	Technical College Dayalbagh.	Electrical & Mechanical Engg. and Automobile Engg.	2 years.	High School with Science.	Principal.
6.	„	Leather Working School, Dayalbagh.	Leather Works.	2 years.	Upto VIII Class.	do.
7.	„	Wiremen Class Dayalbagh.	Wireman Class.	...	...	do.
8.	„	St. Joseph Orphanage.	Tailoring & Knitting.	1 year.	Able to read & write.	Manager.
9.	„	Narendra Vidya Mandir Kirauli.	Weaving, Spinning Black Smithy.	2 years.	do.	Secretary.
10.	Almora.	Prem Vidayalaya Tari-Khet.	Spinning.	2 years.	do.	do.
11.	Badaun.	Christian School of Arts and Crafts.	Tailoring, Spinning Carpentry.	2 years.	do.	

12.	Banares.	Municipal Leather Working School.	Leather Works.	2 years.	Upto VIII Class.	Chairman.
13.	„	Wesseley Technical School.	Carpentry, Tailoring, Black-Smithy, Wireman Class.	5 years.	Able to read & write.	Manager.
14.	„	Banares Hindu University Ceramics.	Pottery Works.	10 months.	Upto VIII Standard.	
15.	„	Kashi Anathalaya.	Weaving, Spinning Tailoring, Knitting.	2 years.	Able to read & write.	do
16.	„	Anjuman Islamia Orphanage.	Tailoring, Knitting	2 years.	do	Hony. Secretary.
17.	„	Arya Samaj Orphanage.	Spinning, Weaving Tailoring, Carpentry.	3 years.	do	Head Instructor.
18.	„	Municipal Tailoring School.	Tailoring.	2 years.	do	Chairman.
19.	Bara-Banki.	Hewett Weaving School.	Weaving.	2 years.	do	Superintendent.
20.	„	Mason Leather working School Radauli.	Leather Works.	2 years.	Upto VIII Standard.	Honorary Secretary.
21.	Etawah.	Ch. Gur Narain Industrial School, Manikyur.	Black-Smithy, Electric Fitters.	2 years.	Able to read & write.	do

'List of Government aided Technical & Industrial Institutions in Uttar Pradesh'—*(contd.)*

Serial No.	Name of Institution & Its Location		Subjects taught	Duration of course.	Admission Qualification required.	Designation of the Head of the Institution.
1.	2		3	4	5	6
	Location.	Name.				
22.	Etah.	Ram Ashram Art School.	Weaving, Carpentry, Colouring.	3 years.	Able to read & write.	Manager.
23.	Gorakhpur.	District Board weaving School	Weaving.	1 year.	do	Chairman.
24.	Gonda.	District Board weaving School	do	1 year.	do	do
25.	Ghaziabad.	Mahila Shilp Nikotan.	Tailoring & Knitting.	2 years.	Able to read.	do
26.	Hamirpur,	Rahmania Carpentry School, Maudaha.	Carpentry.	2 years.	Able to read & write.	Manager.
27.	Hardoi.	Hadi Carpentry School.	do	3 years.	Upto VIII Standard.	Honorary Secretary.
28.	,,	D. B. Industrial School.	Tailoring and Weaving.	3 years.	Able to read & write.	Chairman.
29.	Jhansi:	Din Hitkarini Carpentry School.	Carpentry.	3 years.	Upto VIII Standard.	Honorary Secretary.

30.	Kanpur.	Hindu Orphanage.	Carpentry.	3 years.	Able to read & write.	do
31.	,,	Muslim ,,	,,	5 years.	do	do
32.	Lucknow.	Arya Samaj Tailoring School.	Tailoring.	2 years.	Upto VIII Standard.	Chairman.
33.	,,	Muslim Mumtaj Orphanage.	Carpentry, Leather Works.	10 years.	Upto VIII Standard.	Honorary Secretary.
34.	,,	All India Shia Orphanage.	Weaving, Tailoring Carpentry and Leather Works.	3 years.	Able to read & write.	Manager.
35.	,,	Deaf & Dumb Institute.				Principal.
36.	,,	Kamla Nehru Mahila Shilp Shiksha Kendra				
37.	Agra.	Stewart Ward Memorial School, Sikandra.	Carpentry, Tailoring, Leather works.	3 years.	Upto VIII Standard	do
38.	Moradabad.	I. D. Technical Institute, Bahjoi	Mech. Engineering.	3 years.	High School	do
39.	Manipuri.	Kuar Lal Singh Man Singh Industrial School.	Weaving, Tailoring Carpentry & Tar Kashi works.	2 years.	Able to read & write	Hony. Secretary.

'List of Government aided Technical & Industrial Institutions, Uttar Pradesh'—*(contd.)*

Serial No.	Name of Institution & Its Location.		Subjects taught.	Duration of course.	Admission Qualification required.	Designation of the Head of the Institution.
1	2		3	4	5	6
	Location.	Name.				
40.	Mathura.	Mahilla Shilp Vidyalaya Mathura	Tailoring, Knitting, Embroidery, Toy Making, Leather works, Weaving.	2 years.	Upto VIII Standard	Manager.
41.	,,	Prem Maha Vidyalaya, Vindraban.	Engineering.	3 years.	High School Passed with Science.	Principal.
42.	Meerut.	Vaish Orphanage	Carpentry & Tailoring	3 years.	Upto VIII Standard	Superintendent.
43.	,,	Urmila Mahila Dastkari School	Weaving, Tailoring Toy Making.	2 years.	Able to read & write	Secretary
44.	Pratap Garh.	Aided Mission Weaving school	Weaving.	2 years.	do	Manager.
		'Institutions getting Non-Recurring Grants'.				
45.	Agra.	Mahila Shilp Kutir Sitlagali, Agra.	Tailoring, Embroidery Knitting Fancy Leather with Spinning.	9 months.	Able to read &write	Headmistress.
46.	Almora.	District Board Carpentry School, Almora.	Carpentry, Tarkeshi Polishing & Canning.	3 years.	do	Secretary.

47. Kala Mandir, Kanpur	Rajesh Shilp.	Embroidery, Tailoring Soft Toy making & Salma work.	1 year.	Able to read & write	President.
48. Shikhalaya, Lucknow.	Mahila Shilp.	Knitting, Embroidery, Tailoring.	1½ years.	do	President.
49. Sri Gandhi Audyogic College, Orai.	Jalaun.	Tailoring, Carpentry, Weaving & Black Smithy.	2 years.	do	Principal.

'Government Industrial & Technical Institutions in Uttar Pradesh'.

1. Allahabad.	Carpentry School,	1. Artisan Class.	2 years.	Students must have a practical knowledge of carpentry.	Principal.
		2. General wood-working class.	3 years.	Upto X standard.	
		3. Advanced wood-working class.	do	Students who have passed the general wood-working class are admitted if they prove capacity to undertake advanced study.	
		4. Teachers' training class.	2 years.	Those students who have completed the general or advanced classes of the school, or who can demonstrate their ability to take up, can be admitted.	

'Government Industrial & Technical Institutions in Uttar Pradesh.'—*(contd.)*

Serial No.	Name of Institution & Its Location.		Subjects taught	Duration of course.	Admission Qualification required.	Designation of the Head of the Institution.
1	2		3	4	5	6
	Name.	Location.				
			5. Paint and Polishing class.	3 years.	No educational qualifications are prescribed.	
			6. Upholstery class.	do	do	
2.	Occupational Institute,	Allahabad.	1. General machinist.	2 years.	Read upto VIII class	Principal.
			2. Machinist.		do	
			3. Tool maker (not yet started)	do	do	
			4. Turner.	do	do	
			5. Cabinet maker (not yet started.)	1 year.	do	
			6. Carpenter. do	do	do	
			7. Painter. do	do	do	
			8. Decorator. do	do	do	
			9. Copper and tin smiths' class.	do	do	
			10. Printing class (not yet started.)	do	do	
			11. Utensil making class.	do	do	

3.	Janardan Joshi Polytechnic,	Almora.	1. Weaving.	3 years.	Able to read & write	Headmaster.
			2. Carpentry.	2 years.	Upto VIII standard	
			3. Dyeing & Printing	do	do	
			4. Leather work.	3 years.	do	
4.	Metal working School,	Aligarh.	1. Mechanics class.	2 years.	Read up to middle standard.	Superintendent.
			2. Artisan class.		for sons of artisans.	
5.	Central Weaving Institute,	Banares.	1. Senior Class for Supdts. & Managers	3 years.	High School	Principal
			2. Advance class for Instructor & Maistries.	1 year.	Those students who have passed the junior class of the institute or any of other Schools recognised by the department. Only those students are admitted who have passed the artisan class of the institute or that of any other weaving school recognised by the Industries Department.	
			3. Junior class for Instructor & Maistries.	do	Able to read and write.	

'Government Industrial & Technical Institutions in Uttar Pradesh'.—*(contd.)*

Serial No.	Name of Institution & Its Location.		Subjects taught.	Duration of course.	Admission Qualification required.	Designation of the Head of the Institution.
1	2		3	4	5	6
	Name.	Location.				
			4. Artisan class.	1 year		
6.	Batuk Prasad Khatri Industrial School,	Banares.	1. Non-Artisan course.	5 years.	Upto VIII standard.	Headmaster.
			2. Artisan course.	2 years.	For sons of artisans having miscellaneous practical knowledge of brassware manufacture.	
7.	Central Wood Working Institute,	Bareilly.	1. Cabinet making & Joining.	3 years	Up to VIII standard. Preference will be given to candidates who have passed the High School Examination with manual training.	Principal
			Elementary:			
			2. Advanced Cabinet making & joining	2 years.	For those who have passed the elementary course.	
			3. Foreman Cabinet making & joining.	do	For those who have passed advanced class.	

			4. Artisan Cabinet making & joining.	do	For sons of artisans	
			5. Machine tools class.	3 years.	Up to VIII standard. Preference will be given to those who have some knowledge of wood-work.	
			6. Printing and Polishing class.	2 years.	Up to VIII Standard do	
			7. Upholstry class.	do	do	
			8. Kiln Operators class.	1 year.	do	
8.	Govt. Polytechnic,	Dehradun.	1. Carpentry.	2 years	Passed VIII class.	Superintendent.
			2. Motor Mechanics	do	do	
			3. Electric Wiremen	1 year.	do	
9.	Tanning School,	Fatepur	1. Tanning Works.	2 years.	Able to read & write.	Headmaster.
10.	Technical Institute,	Goarkhpur.	1. Mechanical and Electrical Engineering Class.	3 years followed by 2 years as practical apprenticeship in a work shop.	High School or Senior Cambridge Examination passed with science as optional subject.	Principal.

'Government Industrial & Technical Institutions in Uttar Pradesh'.—*(contd.)*

Serial No.	Name of Institution & Its Location.		Subjects taught	Duration of course.	Admission Qualification required.	Designation of the Head of the Institution.
1	2		3	4	5	6
	Name.	Location.				
			2. Artisan class.	3 years	Read up to IV Standard.	
			3. Wiremen class.	1 year.	do	
11.	Technical Institute,	Ghazipur.	1. Mill-wright.	3 years.	Middle Examination passed. Preference to High School or Senior Cambridge Examination passed with science as optional subject.	Principal.
			2. Mechanist.	do		
			3. Moulding.	do		
			4. Smithy.	1 year.	do	
			5. Welding.	do		
12.	Weaving and Cloth Printing School,	Bulandshahr.	1. Weaving.	1 year	Able to read & write	Headmaster.
			2. Dyeing & Printing.	2 years.	do	do
13.	Govt. Industrial School,	Charikhari, (Hamirpur)	1. Weaving.	1 year.	do	Superintendent.

			2. Carpet Durie and Niwar Weaving.	do	do	
			3. Leather.	2 years	Up to VIII Standard.	
			4. Carpentry.	3 years	do	
14.	Technical Institute,	Jhansi.	1. Mechanical & Electrical Engineer class.	4 years	High School or Junior Cambridge Examination with mathematics.	Principal.
15.	H. B. Technical Institute,	Kanpur.	1. General Research.	2 years	B.Sc. in Science or Agriculture	do
			2, Oil Section :—			
			(a) Diploma course for oil technologist.	2 years	do	
			(b) Post-diploma course.	2 years	do	
			3. Short-term courses :—			
			(a) Oil milling.	6 months	do	
			(b) Soap making.	do	do	
			(c) The preparation of Oils, Paints and Varnishes.	do	do	
16.	Central Textile Institute,	Kanpur	General Textile Technology section:—(a) Diploma course in Cotton carding & Spinning, or	3 years followed by 1 year's apprenticeship in a mill.	High School.	do

'List of Government aided Technical & Industrial Institutions in Uttar Pradesh'—*(contd.)*

Serial No.	Name of Institution & Its Location.		Subjects taught	Duration of course.	Admission Qualification required.	Designation of the Head of the Institution.
1	2		3	4	5	6
	Location.	Name.				
			(b) Diploma course in Textile Manufacture (Power loom weaving).			
16.			2. Part time apprentice Course.	2 years course.	Read up to 10th standard and must be engaged in the mills.	Principal.
			3. Diploma course in Chemical Techlogy.	3 years followed by 1 year's apprenticeship in a mill.	High School.	
			4. Artisan course.	2 years.	Must be able to read & write.	
17.	Leather Working School,	Kanpur.	1. Leather Works.	2 years.	Upto VIII Standard.	do.
18.	Technical Institute,	Lucknow.	1. Mechanical Engineering.	3 years followed by 2 years practical apprenticeship.	High School or Senior Cambridge Examination with Mathematics or Physics.	do.

		2.	Electrical Engineering		
		3.	Light machines mechanics class.	3 years.	Upto VIII Standard.
		4.	Oil engine driver's class.	5 months.	Must be literate having some workshop experience.
		5.	Wireman class.	1 year.	Read upto IV Standard.
19.	Occupational Institute, Lucknow.	1.	Mechanical Draftsman. (Not yet started)	2 years.	Read upto High School with Drawing.
		2.	Motor mechanics	do.	
		3.	Radio mechanics.	1 year.	
		4.	Electrical Instruments mechanics.	1 year.	
		5.	Welders (Electric & Gas).	1 year.	Read upto VIII Class.
		6.	Electroplaters & Polishers.	1 year.	do.
		7.	Plumbers.	do.	do.
		8.	Tin & Coppersmith.	do.	do.

Principal.

'List of Government aided Technical & Industrial Institutions in Uttar Pradesh'—*(contd.)*

Serial No.	Name of Institution & Its Location.		Subjects taught	Duration of course.	Admission Qualification required.	Designation of the Head of the Institution.
1	2		3	4	5	6
	Location.	Name.				
20.	Model Weaving School,	Mau.	1. Artisan class.	1 year.	Able to read and write.	Superintendent.
At Meerut:						
21.	Ch. Mukhtar Singh Govt. Polytechnic.	Meerut.	1. General Mechanics.	2 years.	High School preferably with Science.	Principal
			2. Motor Mechanics.	2 years.		
			3. Electroplatery.	2 years.	Junior High School pass.	
			4. Sheet smithy.	2 years.		
			5. Electric wiremen or armature winding.	2 years.		
At Daurolo:			1. Chemical Technology.	2 years.	Inter. Sc. with Physics, Chem, Maths.	
23.	Govt. Women's Domestic Vocational School,	Rampur.	1. Tailoring.	2 years.	Able to read & write.	Head Mistress.

			2.	Embroidry & Knitting.	1 year.	do.	
			3.	Asni & Niwar Weaving.	1 year.	do.	
			4.	Calico Printing.	1 year.	do.	
24.	Polytechnic,	Srinagar (Garhwal.)	1.	Weaving.	1 year.	Able to read & write.	Head Master.
			2.	Carpentry.	3 years.	Upto VIII Standard.	
			3.	Tailoring.	1 year.	do.	
25.	Government Polytechnic,	Techri (Garhwal).	1.	Tailoring.	2 years.	Able to read & write.	Head Master.
			2.	Weaving.	1 year.	do.	
			3.	Carpentry.	3 years.	Upto VIII Standard.	
26.	School of Arts & Crafts,	Lucknow.	1.	Fine Arts.	5 years.	Upto IX-Class with English.	Principal.
			2.	Gold Smithy Class.	do.	do.	
			3.	Silver Smithy Class.	do.	do.	
			4.	Iron Work Class.	do.	do.	
			5.	Wood Work Class.	do.	do.	
			6.	Art Printing.	do.	Upto VII Standard with English.	

'List of Government aided Technical & Industrial Institutions in Uttar Pradesh'—*(contd-)*

Serial No.	Name of Institution & Its Location.		Subjects taught.	Duration of course.	Admission Qualification required.	Designation of the Head of the Institution.
1	2		3	4	5	6
	Location.	Name.				
			7. Drawing for reproduction class.	5 years.	Upto IX-Standard with English.	
			8. Architectural design and Draftsmanship.	do.	do.	
			9. Drawing Teachers' training class.	2 years.	High School with drawing as optional subject.	

CARPENTRY.

INTRODUCTION

High class and precision carpentry needs a good knowledge of science and technic. High class carpentry work is in fair demand in furniture making and instruments making firms including concerns which make sailing vessels. For qualification in this field the following are the institutions :—

1. School of Industry, Ratnagiri—3 years—'A' Certificate.
2. Tamilnad Polytechnic, Madurai—3 years—Certificate.
3. Govt. School of Arts & Crafts, Madras—2 years—Diploma in wood work. (Advanced)
4. Govt. School of Arts and Crafts, Madras—3 years—Certificate course in wood work (elementary)
5. Rayalaseema Polytechnic, Bellary—3 years—Diploma in Wood-work.
6. The Chengalvarayan Technical Institute, Madras 7—One year industrial course leading to the certificate.
7. Govt. School of Arts and Crafts, Lucknow—Five years.
8. Christian Technical School, Balasore, Orissa—Technical Diploma—5 years; Artisan course—3 years.
9. St. Joseph's Industrial School, Gunadala, Vijayawada.
10. Sri Krishna Industrial School, Vijayawada.
11. Sri Harijan Industrial School, Bheemavaram (West Godavari Dt.)
12. Sri Krishnashram Industrial School, Guntur.
13. St. Michael's Industrial School, Guntur.
14. Anjuman Industrial School, Mount Road, Madras.
15. Thakkar Bapa Vidyalaya, Tyagarayanagar, Madras.
16. Madras-i-Hussainy Yateemkhana Industrial School, Thousand Lights, Madras.
17. American Advent Mission Industrial School, Velacheri, Chingleput Dt.
18. Lady Willingdon Leprosy Sanatorium, Tirumani, Chingleput Dt.
19. Anjuman Industrial School, Vellore.
20. Anjuman Industrial School, Tiruppattur, North Arcot Dt.
21. Anjuman Industrial School, Melvisharam, N.A. Dt.
22. Don Bosco Industrial School, Vellore.
23. St. Joseph's Industrial School, Tindivanam.
24. District Board Industrial School, Tanjore.
25. St. Francis Xavier's Industrial School, Tanjore.

26. S.P.G. Art Industrial School, Nazareth.
27. St. Joseph's Industrial School, Tiruchirapalli.
28. Karur Industrial School, Karur.
29. Pasumalai Trade School, Madurai.
30. C.S.M. Industrial School, Dindigul.
31. St. Joseph's Industrial School, Adaikalapuram.
32. St. Ignatius Industrial School, Tuticorin.
33. St. Theresa's Industrial School, Maravaneri, Salem.
34. St. Joseph's Industrial School, Coimbatore.
35. Danish Mission Industrial School, Panruti.

Duration of the course—Two years.

Qualification for admission—A pass in VIII Standard or III Form.

SCOPE

Good class carpenters with training are required in all kinds of engineering. Also the shipbuilding trades such as at Vizag., take carpenters on skilled work.

Note (*1*) There is a Wood-worker's Drawing Certificate course of three years duration at the Central Polytechnic, Madras. The course is a part time one open to bonafide apprentices.

(*2*) 76 scholarships to the value of Rs. 10 to 15 each are awarded to the students of the various Arts and Crafts section and 38 scholarships of value of Rs. 10 to 25 are awarded by the Principal of the School of Arts and Crafts, Madras. Besides these the Director of Harijan Welfare, the Victoria Institute and the Warden of Venkateswara Hostel award scholarships to students undergoing this course at the School of Arts and Crafts, Madras.

CABINET MAKING

Institutions where the Course is taught :—

Tamilnad Polytechnic, Madurai.
Kerala Polytechnic, Kozhikode.
Karnataka Polytechnic, Mangalore.
Rayalaseema Polytechnic, Bellary.
St Joseph's Industrial School, Gunadala, Vijayawada.
Sri Krishna Industrial School, Suryaraopet, Vijayawada.
Sri Krishnashram Industrial School, Guntur.
St. Michael's Industrial School, Guntur.
Anjuman Industrial School, Mount Road, Madras.
Thakkar Bapa Vidyalaya, Tyagarayanagar, Madras.

Madras-i-Hussainy Yateemkhana Industrial School, Thousand Lights, Madras.

American Advent Mission Industrial School, Velacheri, St. Thomas Mount, Chingleput District.

Lady Willingdon Leprosy Sanatorium, Tirumani, Chingleput Dt.

Anjuman Industrial School, Vellore.

Anjuman Industrial School, Tiruppattur, North Arcot Dt.

Anjuman Industrial School, Melvisharam, N.A. Dt.

Don Bosco Industrial School, Vellore.

St. Joseph's Industrial School, Tindivanam.

District Board Industrial School, Tanjore.

St. Francis Xavier's Industrial School, Tanjore.

St. Mary's Industrial School, Kumbakonam.

S.P.G. Art Industrial School, Nazareth.

St. Joseph's Industrial School, Adaikalapuram, Tirunelveli Dt.

St. Ignatius Industrial School, Tuticorin.

St. Theresa's Industrial School, Maraveneri, Salem.

St. Joseph's Industrial School, Ootacamund.

St. Joseph's Industrial School, Tiruchirappalli.

C.S.M. Industrial School, Dindigul.

Duration of the course :—Two years.

Qualifications for admission—a pass in VIII standard or III form.

JUNIOR CARPENTRY IV Class—2 years—Certificate.

1. K.E.S. Topiwala Industrial School, Alibag.
2. R.B. Seth P.K. Kotawalla Technical School, Patna.

AGRICULTURAL CARPENTRY AND SMITHY

Literate—2 years.

1. David Sassoon Industrial School, Bombay (Agricultural smithy only)
2. Yervada Industrial School, Yervada (Agricultural smithy only)
3. School of Industry, Satara.
4. School of Industry, Hubli.

CARPENTRY 'A'

Three years duration—fifth class.

1. Primary Handicraft Classes, Girguam, Bombay.
2. R.H. Patuck Industrial School, Santa Cruz.

3. School of Industry, Ratnagiri.
4. Secretary, Schools Committee, Bombay.
5. B.N. Gamadia Parsee Hunnarshala, Bombay.
6. Marine College and Seamen's Orphanage, Novha.
7. Private High School, Rajapur.
8. V.J. Municipal Technical School, Poona.
9. School of Industry, Satara.
10. School of Industry, Sholapur.
11. Robertson School of Industry, Bandharpur.
12. Modern High School, Ahmednagar.
13. King Edward VII Technical Institute, Dhulia.
14. F.S. Parekh Technical Institute, Surat.
15. American Mission Boys' High School, Ahmednagar
16. K.E.S. Topiwalla Industrial School, Ahmednagar.
17. School of Industry, Hubli.
18. Topiwalla Memorial Technical School, Sawantwadi.
19. Industrial school, Amreli.
20. Sir Cusrow Wadia Institute of Electrical Technology, Poona.

CARPENTRY 'B'

Three years duration—fourth class.

1. B.N. Gamadia Parson Hunnarshala, Bombay.

CARPENTRY 'C'

Three years duration—literate.

1. School of Industry, Ratnagiri.
2. B.N. Gamadia Parsee Hunnarshala, Bombay.
3. David Sasson Industrial School, Bombay.
4. Marine College and Seaman's Orphanage, Nouha.
5. Yervada Industrial School, Yervada.
6. Vocational Training College, Ankleshwar.

WOOD TURNING AND LACQUERING

Literate—2 years.

1. David Sasoon Industrial School, Matunga, Bombay.
2. R.H. Patuck Industrial School, Santa Cruz.

MOTOR BODY BUILDING AND UPHOLSTRY

After carpentry 'A' certificate the above course could be taken at The School of Industry, Ratnagiri—one year.

Note: useful book to read "Projects in Woodwork" by Roberts and Douglas.

Documentary Film: of Govt. of India 'Handicrafts of India' Illustrates useful points in these careers.

Road Inspector's course: 9 months, School of Engineering, Nilokheri, Punjab.

Surveyor Course: 9 months, School of Engineering, Nilokheri, Punjab.

Kiln Seasoning: 1 year course at Govt. Central Wood Working Institute, Bareilly U. P.

Forest Research Institute, Dehra Dun: 3 to 6 months training.

Finger Print Bureau, Poona: gives training in this branch. However this training is not for outsiders but for those in Police Service for whom this is an useful qualification. There is also another Bureau at Vellore, Madras.

Note: Finger Print checkers are taken in the Railway Service.

Adult School Teachers Certificate Course: for two months—qualifications III form upwards. The Schools are Govt. Training School for Adult School Teachers, Rajahmundry, Mangalore (Women), Kozhikode, Kancheepuram, Dindugal, Udayagiri, Chunangad, Mayanur, Nellore, Eluru, Masulipatam (Women).

Trained Maistry: after Carpentry 'A' Certificate one could take up trained maistry, one year course at the following institutes:

School of Industry, Ratnagiri.
V. J. Municipal Technical School, Poona.
School of Industry, Sholapur.
Robertson School of Industry, Pandharpur.
King Edward VII Technical School, Dhulia.

Typography: 3 years certificate course—literacy sufficient.

at (1) K.E.S. Topiwalla Industrial School, Alibag.
(2) K.E.S.V.K. High School, Panvel.
(3) Maharashtra Mudranshala, Poona.

Fibre Industry: Literate—2 years—at School of Industry, Satara.

Handmade Paper Making: Literate—1 year.

at (1) F. S. Parekh Technical School, Surat.

(2) Private High School, Rajapur.

School Leaving Technical Certificate: Kalaniketan, Jabbalpore has Elementary, Secondary, and High School education (total of seven years, leading to the School Leaving Technical Certificate.) Besides the general curricula subjects included are:—Workshop Practice, General Engineering and Crafts.

Documentary Films: of Govt. of India in the field of Cottage Industries and Handicrafts are:—'Handicrafts of Travancore': 'Tree of Wealth," 'Palm History'.

AGRICULTURE

INTRODUCTION

Agriculture is the occupation of the majority of people in India; however those who enter this profession with some training would be able to make this career useful and attractive ones.

INSTITUTES

(1) Chinsurah Govt. Agricultural School, Chinsurah—2 years—Diploma.

(2) Institute of Plant Industry, Indore—2 years—Diploma.

(3) School of Agriculture, Gorakpur—2 years—Diploma.

(4) Agricultural School, Bulandshar—2 years—Diploma.

(5) Agricultural School, Ghazipur—2 years—Diploma.

(6) Agricultural School, Hawalbagh—2 years—Diploma.

(7) Agricultural School, Chirgaon—2 years—Diploma.

Note: (1) There is a Ploughman's training class of one year at the Institute of Plant Industry, Indore. Madhya Bharat.

(2) The Kanpur Agricultural College often publishes brief notes on 'Economics of Cultivation' useful for the youngman who wishes to take farming as a career. For example "The Economics of Pan Cultivation" in their journal of May 1952 is useful in working out a career in this branch.

SCOPE

A training in agriculture fits one to run a small farm on his own and apply his skill in modern farming. With amenties of tractor and modern facilities the trained farmer could make a good living comparable with any Government service. In addition the

career is a healthy, interesting and a nation building one. The farmer could also develop subsidiary cottage Industries like bee-keeping, poultry farming and cattle farming.

Books of Reference: The following books are recommended for reading for the student who is considering running his own farm together with cottage industries. 'Bee-keeping in South India' an Agricultural Department Publication Number 37; 'Practical Poultry Management' by Wiley; 'The Cow in India' by Satish Gupta. 'Dairying in India' by J. N. Warner.

Documentary Films: The following Govt. Documentary Films may be seen in this connection 'New Pastures', 'Co-operative Farming', 'Winged Scourge', 'Green Glory', 'India Ploughs deeper', 'The Etawah Story'.

NURSING

INTRODUCTION

Nursing is an important profession for which training facilities exist in the provinces. The career is an useful one in Government or private hospitals. In times of war or peace there is always a demand for services of the nurse.

INSTITUTES

In Madras State, candidates after Matric. could take up the three and a half years' course for nurses training in hospitals. Candidates may apply to (a) President, Regional Committee for selection of nurse pupils, General Hospital, Madras; (b) Superintendent, King George Hospital, Vizagapatam; (c) Superintendent, Government H. Q. Hospital, Guntur; (d) Superintendent, Government H. Q. Hospital, Kozhikode.

SCOPE

Service in Hospitals; as nurses in Railways (age generally under 30); as midwife in the railways (age usually under 30); nurses in Port Trusts, large factories, field ambulances, fire services, and Defence Forces.

Note: See also the Government of India Documentary film 'Women in White' about Nurses' Training and Employment.

The Indian Red Cross Society & St. John's Ambulance Certificates.

Certificates of proficiency in First aid, Nursing, Hygiene and Sanitation, Domestic Hygiene and Mothercraft issued by the above institutes are valuable additional qualifications. The address of the Association : 20, Talkatora Road, New Delhi-2.

Andhra Mahila Sabha, Mylapore, Madras : has a hostel and has facilities for women to study for E. S. L. C. (Madras) Admission Exam. (Banaras), Inter. (Banaras) for which private appearance is allowed for women. Other examinations for which they are coached :—Hindi and Fine arts.

The Rajyalakshmi Institute of this Sabha train women for crafts (a) Lower and Higher grade Govt. Technical Exams. (b) independent syllabus (c) those organised by Govt. of India.

(a) 1. Needle work and Dress making.
2. Embroidery.
3. Handloom weaving.
4. Composing, Book-binding, and Printing.

(b) 5. Ginning, Carding, Silver making, Spinning.
6. Lace work and knitting.
7. Thamburi Embroidery.

(c) 8. Dyeing and Printing of Textiles.

Cottage Industries : Printing and Dyeing of Textiles, Toy-making and Fancy Leather work are taught on a cottage industry basis to give training.

Press : Training is provided for women in Composing, Book binding and Printing, according to syllabus for Govt. Technical Examinations.

The Lakshalamma Technical Institute of the Sabha offers coaching in shorthand and typewriting.

Thakkar Bapa Vidyalaya, Madras 17 : is a foundation for *harijans* with hostel accomodation ; it has facilities for training in the following : Workshop and Craft, Carpentry and Cabinet-making, Smithy, Tailoring and cutting, Rattan work facilities, Hand paper-making, and Printing and Binding.

The St. Mary's Technical School for Indian disabled Soldiers, Kirkee, (Poona) gives technical training in trades for disabled men from the forces to fit them for careers.

INDIAN AIR FORCE—TRADES

Airman vacancies for employment in the trades of Instrument repairers I & II in the I. A. F. occur at places like Kanpur. Candidates will be required to pass a trades test. On selection, duties would include inspection, adjustment, caliberation, installation, maintainence and overhaul of all instruments in the aircraft and mechanical transport. Apply nearest airforce station: Ambala, New Delhi, Palam, Poona, Barrakpur, Tambaram, Kanpur or to I.A.F. Liason Officer, Hindustan Aircraft Ltd., Bangalore. Vacancies also occur in the Air Force Police or as clerks.

STAGE I

CHAPTER—II

APPRENTICESHIPS AND TRAINING

CONTENTS

1. Apprentice Railway Mechanics.
2. Telephone Service.
3. Apprentice Firemen.
4. Apprentice Assistant Train Examiners,
5. Apprentice Industrial Training Workshops.
6. Tata Iron and Steel Company Training Course.
7. Electrical and Mechanical Engineering Apprenticeships.
8. Training Centre for Adult Blind.
9. Workshop Apprentice Course.
10. Engineering Apprentice.
11. Apprenticeship at Badravathi.
12. Home and School for the Blind.

(1) Apprentice Railway Mechanics.

The Central Railways Service Commission recruits apprentice mechanics from young men who have passed Matric. and who are between 16–19 years of age. Candidates must have offered Physics, Chemistry and Mathematics. Selected candidates will have to undergo training for five years in the workshops and sheds on the Southern Railway. They will also have to execute a prescribed agreement and also deposit cash security. Candidates should apply to the Central Railway Commission after announcements are made in the press.

(2) Telephone Service.

The Indian Post and Telegraphs recruit apprentices between ages of 18-23 for telephone service. Candidates should apply to the District Telephone Officers.

(3) Apprentice Firemen.

The Central Railway Commission recruits Firemen Apprentices from Matric. passed youngmen between ages of 16-20 for a two years training. Stipend during training is given.

(4) Apprentice Assistant Train Examiners.

The Central Railway Commission recruits apprentice Assistant Train Examiners from Matric. passed young men who have taken Mathematics, Physics and Chemistry. Age limits 17-19.

(5) The Industrial Engineering Workshops, Washermanpet, Madras.

Takes 6 apprentices for a five years training in their workshops. Candidates should be above 15 years of age and must be part time students of the Central Polytechnic, Madras.

(6) Training Courses.

The Tata Iron and Steel Company Ltd. take trade apprentices to be trained at Jamshedpur Technical Institute. The age limits of the candidate must be between fifteen and eighteen. The course is of two year's duration during which period the apprentices will receive a maintenance allowance. On the completion of the course, the works manager will select such apprentices as he considers suitable for offer of posts. The candidates should apply to the Technical Institute, (Tata's) Jamshedpur.

(7) Electrical and Mechanical Engineering Apprenticeships.

Civilian apprentices between 15-17 years of age are taken for 4 years apprenticeship at the EME workshops at Kakinara, Delhi Cant., Jabalpur, Allahabad, Kirkee and Bangalore. Candidates must have taken Mathematics (preferably) in their Matric. There will be a competetive exam. for selection. Stipends will be paid during apprenticeship.

(8) Training Centre for Adult Blind, Dehra Dun.

Handicrafts and trades are taught at this institute which is run by Govt. of India. Among the trades are:—weaving, spinning, making of bags, making of sports nets, canning of chairs, cycle baskets, chicks and brooms, and sock knitting. Candidates should apply to Training centre for Adult Blind, Presidents' Body Guard lines, Rajpur Road, Dehra Dun. The period of training is two years.

(9) Workshop Apprentice Course.

2 years-certificate—State transport training workshop, Dapodi, Poona, 3.

(10) Engineering Apprentice.

Two years—at V. J. Technical Institute, Bombay.

(11) Mysore Iron and Steel Works, Badravathi.

Takes apprentices who undergo 2 years certificate course in Mechanical Engineering at the Silver Jubilee Technical School, Badravathi.

(12) The Home and School for the Blind, Adarsh Nagar, Ajmer.

is run by State Govt. for educating Blind boys upto age of 18 years and giving them training in Handicrafts and Music.

STAGE I

CHAPTER—III

ENGINEERING

CONTENTS

1. Automobile Engineering.
2. Civil Engineering.
3. Electrical Engineering.
4. Mechanical Engineering.
5. Mechanical and Electrical Engineering combined.
6. Sound Engineering.
7. Fire Engineering.
8. Sanitary Engineering.
9. Internal-combustion Engineering.
10. Foundry Engineering.
11. Radio Engineering.
12. Telegraphy.
13. Radio Servicing.
14. Wireless Telegraphy.
15. Architecture.
16. Town Planning.
17. Institute of Engineers (India).
18. India Society of Engineers.
19. City and Guilds Examinations.

1. Automobile Engineering

INTRODUCTION

Automobile Engineering is a special branch of Mechanical Engineering dealing with vehicles and motors driven by internal combustion Engines.

INSTITUTES

The following are the institutions offering these courses :

1. A. H. Polytechnic—Coimbatore—Diploma—3 years.
2. Tamilnad Polytechnic—Madura—Diploma—3 years.
3. Karnataka Polytechnic—Mangalore—Diploma—3 years.
4. Karnataka Polytechnic—Mangalore—Certificate—3 years.
5. Govt. Engineering School—Nagpur—Diploma—3 years.
6. F. S. Parek Technical Institute—Surat—Certificate—3 years (Fifth form sufficient).
7. Ramakrishna Technical Institute—Mylapore.—Diploma—3 years.
8. Nagpur University—Diploma—3 years.
9. Rayalaseema Polytechnic—Bellary—3 years—Certificate in Auto service.
10. Govt. Technical Institute—Ambala—4 years—Diploma—Automobile Repairs.
11. Govt. Polytechnic—Kalamasseri—Diploma—3 years.
12. George Telegraph Training Institute, Bowbazar St., Calcutta—18 months.
13. Bhavasinghjee Polytechnic Institute, Bhavanagar—3 years—Diploma.
14. H.R.H. Prince of Wales Technical School, Jorhat, Assam—4 years—Diploma.
15. S.N.P.P. Polytechnic, Majura Gate—Surat—3 years—Diploma.
16. National Motor Engineering Institute—6 A, South Coovam Road, Pudupet, Madras—Automobile Engineering—repairs and maintenance—1 year.

AUTOMOBILE ENGINEERING CERTIFICATE

M. H. S. Siddik Technical Institute, Byculla, Bombay.

S. N. Parekh Parsee Polytechnic, Surat.

F. S. Parekh Technical Institute, Surat.

Bhavasinghjee Polytechnic, Bhavanagar.

Duration :-3 years, Minimum Qualification : Fifth form pass.

Note :—At the Jaya Chamarajendra Occupational Institute, Bangalore there are the following courses in this branch :—

(1) Automobile Driver Mechanics—1 year—Certificate.

(2) Automobile Engineering branch of Mechanical Engineering—Diploma—3 years.

Note:—There is a two years Certificate course for *Automobile Apprentice Certificate* at the M.H. Saboo Siddik Technical Institute, Byculla, Bombay. Third form pass is sufficient.

PROFESSIONAL INSTITUTIONS

The Professional Institute in this connection is the Institution of Automobile Engineers, 12, Hogart Place, London S. W. 1. Class of membership:—student, graduate, post-graduate, associate member, and member.

(2) The Institution of Mechanical Engineers, Storey's Gate, St. James Park, London S. W. 1. (automobile branch).

SCOPE

For employment in the various Industries and firms connected with the making and maintenance of vehicles. The Student can later specialise in either chassis or body Engineering. The qualification enables one to set up his own independent auto service or he may obtain employment in Government transport or the road service of the Automobile Association of India.

Managers, Departmental Mail Motor Service, Indian Railways, Motor Servicing Companies; also service in Govt. Coach Building Factory, Chrompet. Other large Motor car industries for Employment are the Standard Motor Products of India, Vandalur; the Ashok Motors Ltd., Madras, Ennore and Messrs. Simpson & Co. Besides these there are about 300 Factories in Madras State for repair work employing about 10,680 persons. The Automobile Engineer can also specialise in tractor repairs. Other Motor Firms are:—Hindustan Motors, Premier Motors (Bombay), Penninsular Motor Company (Calcutta).

Automoblie Engineers with experience may rise to positions such as Asst. Regional Inspectors and Regional Inspectors in the transport departments.

Such positions as Trainee Asst. Engineers, Central Tractor Organisation require this qualification; as Automobile Engineers, Post and Telegraphs Dept.

2. Civil Engineering

INTRODUCTION

Civil Engineering is mainly concerned with constructional work in connection with Transport (Roads, Railways, Tunnels, Bridges and Harbours), services (water, sewerage) and construction of buildings. There are a number of services like the Public Works Department, Railways and Engineering firms which offer scope for the young men qualified in this field. Professional qualification could be obtained by passing the examinations of the Institute of Engineers (India) at Calcutta. Students could also specialise in Sanitary Engineering which is growing in importance as a service.

INSTITUTES

The following are the Institutions for the Courses :—

1. A. G. Polytechnic, Vuyyur—3 years—Diploma.
2. Andhra Polytechnic, Kakinada—3 years—Diploma.
3. Central Polytechnic, Madras ,, ,,
4. Kerala Polytechnic, Kozhikode ,, ,,
5. Tamilnad Polytechnic, Madura ,, ,,
6. Karnataka Polytechnic, Mangalore ,, ,,
7. Rayalaseema Polytechnic, Bellary ,, ,,
8. The Engineering College, Ludhiana—3 years—Certificate.
9. Sri Chamarajendra Occupational Institute, Bangalore—3 years—Diploma.
10. Sri Chamarajendra Occupational Institute, Bangalore—2 years—Certificate.
11. Bihar College of Engineering, Patna—Diploma—4 years.
12. College of Engineering and Technology, Jadavapur, Calcutta-32—3 years—Diploma.
13. The Calcutta Technical School—Plumbing and Sanitary Engineering—Diploma—4 years.
14. Orissa School of Engineering, Cuttack—Diploma—4 years.
15. College of Engineering, Poona—Diploma—3 years.
16. V. J. T. Bombay—Civil and Sanitary Engineering courses—4 years—Entrance Examination to be taken.
17. Govt. Engineering School, Nagpur—Diploma—3 years.
18. Kalabhavan Technical Institute, Baroda—Diploma—3 years.
19. College of Engineering, Guindy—Diploma—4 years.
20. P. S. G. Charity Industrial Institute, Coimbatore—Diploma.
21. Roorkee University—Overseer and Draughtsman course—2 years.
22. Nagpur University—Diploma course—3 years.
23. Travancore University—Diploma course—3 years.
24. Occupational Institute, Hasan—Diploma—3 years.
25. Occupational Institute, Mysore—Diploma—3 years.
26. Occupational Institute, Devangere—Diploma—3 years.

27. M. B. C. Institute of Engineering and Technology, Burdwan—3 years.
28. Kalikata Shilpa Vidyapith, Calcutta—3 years.
29. Assam Civil Engineering School, Gauhathi—3 years.
30. Tirhut School of Engineering, Muzaffarpur—3 years.
31. K. G. Engineering Institute, Vishnupur—3 years.
32. L. D. Engineering College, Ahmedabad—3 years.
33. B. V. Bhoomraddi College of Engineering, Hubli—3 years.
34. Govt. Engineering College, Jabalpur—3 years.
35. Govt. School of Engineering, Kalsia—2 years—Certificate.
36. Civil Engineering School, Lucknow—2 years.
37. Hewett Engineering School, Lucknow—2 years.
38. Morvi Technical Institute, Morvi—3 years.
39. School of Engineering, Bangalore—3 years.
40. National Institute of Engineering, Mysore—3 years.
41. Maharaja's Technological Institute, Trichur—3 years,
42. C. N. T. Institute, Vepery, Madras—3 years—Diploma.
43. Occupational Institute, Chintamani—3 years—Diploma.
44. Birla Engineering College, Anand—3 years—Diploma.
45. Govt. School of Engineering, Nilokheri, Punjab—2 years—Certificate. (Overseer and Draughtsmen Courses).
46. Jalpaiguri Polytechnic Institute, Jalpaiguri—3 years—Diploma.
47. Hoogly Institute of Technology, Hoogly—3 years—Diploma.

SCOPE

Overseers in Govt. or Municipalities; Marine Engineering Assistants in Harbours, Building Inspectors, Draughtsmen.

Note :—(1) After qualifying in Civil Engineering, the candidate may enter Town planning departments and simultaneously study for the Examination of the Town Planning Institute, 18, Ashlet Place, London. This is a professional qualification recognised for purposes of employment in Design and Town Planning. The Coaching School in this connection is the School of Planning, 34, Gordon Square, London.

Associate members of T. P. I. London, are employed as Junior Assistants in Town Planning Offices or Corporations or as Consulting Surveyors.

(2) After a Diploma in Engineering the Candidate may obtain a Certificate in Sugar Engineering from the Institute of Sugar Technology, Kanpur, after a year's course.

(3) It would be a useful and professional qualification if the student after his Diploma in Engineering passes the examinations of the Institute of Engineers (India) at 8, Gokhale Road, Calcutta. The Associate Membership of this Institute is a recognised qualification for many Government and private Engineering posts.

(4) If the Civil Engineering Diploma holder wishes to have further qualification in building and housing, he may usefully pass the examination of the Institute of Housing at 359, Strand, London.

(5) For foundation Engineering the candidate will find the following Institute useful :—

The Indian National Society on Soil Mechanics and Foundation Engineering at Kennedy House, Simla, S. W.

(6) Matric. passed students can take the associate membership examination of the India Society of Engineers at 12, Netaji Subhas Road, Calcutta-1.

SCOPE

Diploma holders in this branch of Engineering are taken as junior Surveyors in Railways, apprentice Asst. Inspector of works in Railways or as Draughtsmen in Railways, or in Government of India as Field Officers, Ministry of Industry, G.O.I.

3. Electrical Engineering.

INTRODUCTION

This branch of engineering is the study of the use of electrical power and electrical equipment. Candidates can specialise in various trades in subjects like power generation, distribution, traction, installation, air conditioning, meters and instruments and telecommunication. Qualified young men could find scope in electrical railways, electricity supply departments, railway workshops, electrical firms and allied branches. Professional qualification could also be obtained by passing the examinations of the Institute of Engineers (India) or those of the Institute of Electrical Engineers at Savoy Place, Victoria Embankment, London, W.C. 2.

INSTITUTES

The following are the available institutions :

1. Kerala Polytechnic, Kozhikode—Diploma-3 years.
2. Andhra Polytechnic, Kakinada—Diploma-3 years.
3. Chengalvaroyanaickers Technical Institute, Madras-7—Diploma-3 years.
4. Central Polytechnic, Broadway, Madras.—Diploma-3 years.
5. Tamilnad Polytechnic, Madura—Diploma-three years.
6. P. S. G. Charity Industrial Institute, Coimbatore—Diploma.
7. College of Engineering and Technology, Aligarh—Diploma-4 years.
8. College of Engineering, Travancore, Diploma-3 years.
9. Jaya Chamarajendra Institute, Bangalore—Diploma-3 years.
10. Jaya Chamarajendra Technical Institute, Bangalore—Certificate.
11. Calcutta Technical School—Diploma-five years.

12. V. J. T. Institute, Bombay, Diploma—four years (candidates must take an entrance exam. of matric standard)
13. Kalabhavan Technical Institute, Baroda—Diploma-3 years.
14. Sir C. Wadia Institute of Electrical Technology—19, Bundergarden Road, Poona—Diploma-3 years.
15. Morvi Technical Institute, Morvi, Kathiawar—Diploma-three years.
16. The Abdulla Fazalbhoy Technical Institute, Bombay—certificate-one year.
17. R. C. Technical Institute, Ahmedabad—Diploma-Three years.
18. Nagpur University—Diploma-Three years.
19. Travancore University—Diploma-3 years.
20. M. B. C. Institute of Engineering and Technology, Burdwan—3 years.
21. Kalikata Silpa Vidyapith, Calcutta—3 years.
22. Orissa School of Engineering, Cuttack—3 years.
23. H. R. H. Prince of Wales Technical School, Jorhat, Assam—4 years.
24. L. D. Engineering College, Ahmedabad—3 years.
25. S. N. P. Parsi Polytechnic, Surat—3 years.
26. Delhi Polytechnic, Delhi,—3 years.
27. I. D. Technical Institute, Bahjoi—3 years.
28. Occupational Institute, Devanagar—3 years.
29. Occupational Institute, Hassan—3 years.
30. Maharaja's Technological Institute, Trichur—3 years.
31. School of Engineering, Bangalore—3 years-Diploma. There is also a two year certificate course.
32. Chengalvaroyan Institute, Madras—Certificate course for V form passed students-2 years.
33. Occupational Institute, Chintamani—3 years-Diploma.
34. Jadavpur Polytechnic, Calcutta 32—3 years—Diploma.
35. K. G. Engineering Institute—Vishnupur—3 years—Diploma.
36. Jalpaiguri Polytechnic Institute, Jalpaiguri—3 years—Diploma.
37. Hooghly Institute of Technology, Hooghly—3 years—Diploma.

Note (*1*) Students after qualifying for the Diploma in Electrical Engineering could have additional professional qualification by passing the examinations of the Institute of Wireless Technology, 3 Vernon Place, Southampton Row, London W. C. 1.

(*2*) The candidate, in addition to the diploma would do well to pass the examinations of the professional Institute, the Institute of Engineers (India) 8, Gokhale Road, Calcutta.

(*3*) The Chengalvaroyan Technical Institute, Madras-7 has a two years Electrical Engineering certificate course to completed S.S.L.C. holders.

(*4*) The matric. passed student may appear for the associate membership examination of the India Society of Engineers, 12, Netaji Subhas Road, Calcutta-1.

(*5*) Professional Institute in this connection is the Institute of Electrical Engineers, Savoy Place, Victoria Embankment, London W. C. 2.

Note: There are positions such as :—Journeymen, Railways; Senior operator (Boiler House) Railways; Operator 'B' grade control room Railways; Switch Board Attendent Railways; Control Room Operators Railways; Asst. Sub-station operators; Train lighting foremen.

3-1. Electrical Technology

Three year diploma courses at:

1. Sir C. W. Institute of Electrical Technology, Poona.
2. S. N. P. P. Polytechnic Institute, Surat.

3-2. Electricians

Minimum qualification: apprentices–1½ years

1. St. Xavier's College Technical Institute, Bombay.
2. Radio Electric Institute, Bombay.
3. Institute Indo-Portuguese, Bombay.
4. M. H. Saboo Siddik Technical Institute, Bombay.
5. V. J. Municipal Technical School, Poona.
6. Morvi Technical Institute, Morvi.
7. Bhavasinhjee Polytechnic Institute, Bhavnagar.
8. V. J. Technical Institute, Bombay 19.

3-3. Wiremen's Apprentice

Literate—Six months

1. St. Xavier's College Technical Institute, Bombay.
2. Radio Electric Institute, Bombay.
3. Institute Indo-Portuguese, Bombay.
4. M. H. Saboo Siddik Technical Institute, Byculla, Bombay.
5. V. J. Municipal Technical School, Poona.
6. School of Industry, Sholapur.
7. K. E. VII Technical School, Dhulia.
8. Lokamanya Mills Technical Institute, Barsi, Sholapur.
9. R. C. Technical Institute, Ahmedabad.
10. F. S. Parekh Technical Institute, Surat.
11. C. N. Industrial School, Ahmedabad.
12. Morvi Technical Institute, Morvi.
13. Sir Cusrow Wadia Institute of Electrical Technology, Poona.
14. School of Industry, Hubli.
15. Peoples' Technical Institute, Ahmedabad.
16. Bhavasinhjee Polytechnical Institute, Bhavanagar.
17. S. N. Parekh Parsee Polytechnic Institute, Surat.
18. V. J. Technical Institute, Matunga, Bombay-19.

4. Mechanical Engineering.

INTRODUCTION

Mechanical engineering is basic for all branches of engineering and as such, qualification in this field is useful. Scope of employment lies in workshops, railways and firms dealing with machinery.

INSTITUTES

The following are the institutions on this subject :

1. A. G. Polytechnic, Vuyyur—Diploma—3 years.
2. Andhra Polytechnic, Kakinada ,, ,,
3. Central Polytechnic, Madras—Diploma—3 years.
4. Tamilnad Polytechnic, Madurai—Diploma—3 years.
5. Kerala Polytechnic, Kozikhode—Diploma—3 years.
6. Karnataka Polytechnic, Mangalore—Diploma—3 years.
7. Vishvakarma Polytechnic Institute, Phagwara—Diploma—2 years
   * (1—7, S.S.L.C. with Maths., Physics or Chemistry as optionals).
8. Jaya Chamarajendra Occupational Institute, Bangalore—Diploma—3 years.
9. Jaya Chamarajendra Occupational Institute, Bangalore—Certificate—2 years.
10. Chengalvaroya Naicker Technical Institute, Madras 7—Diploma—3 years
11. College of Engineering, Travancore—Diploma—3 years.
12. Jadavpur College of Engineering and Technology, Calcutta, Diploma—3 years.
13. Aligarh College of Engineering and Technology—Diploma—4 years.
14. The Govt. Metal Works Institute, Ambala City—Diploma—4 years.
15. The Govt. Technical Institute, Lucknow—Certificate—3 years.
16. Rampur Govt. Polytechnic, Rampur, U. P.—Certificate—3 years.
17. Calcutta Technical School—Diploma—5 years.
18. V. J. T. Institute, Bombay—Diploma—4 years.
19. Kalabavan Technical Institute, Baroda—Diploma—4 years.
20. Government Engineering School, Nagpur—Diploma—3 years.
21. R. C. Technical Institute, Ahmedabad—Diploma—3 years.
22. Morvi Technical Institute, Kathiawar—Diploma—3 years.
23. O'Brien Technical Institute, Kolhapur—Diploma—4 years.
24. F. S. Parekh Technical Institute, Surat—Certificate—3 years.
25. Nagpur University—Diploma course—3 years.
26. Travancore University—Diploma course—3 years.
27. P. S. G. Charity Industrial Institute—Peelamedu, Coimbatore—Diploma.
28. M. B. C. Institute of Engineering and Technology, Burdwan—3 years.
29. Kalikata Silpa Vidyapith, Calcutta— 3 years.
30. Orissa School of Engineering, Cuttack— 3 years.
31. H. R. H. Prince of Wales Technical School, Jorhat—4 years.
32. L. D. Engineering College, Ahmedabad—3 years.
33. Govt. Engineering College, Jabalpur—3 years.

34. Shivaji Technical Institute, Kolhapur—3 years.
35. Central Technical Institute, Lashkar—4 years.
36. I. D. Technical School, Bahjoi—3 years.
37. The Mysore Iron and Steel Works Silver Jubilee Technical School Bhadravathi—3 years. (also evening classes for workmen).
38. Maharaja's Technical Institute, Trichur—3 years.
39. School of Engineering, Bangalore—3 years—Diploma. There is also a two years' certificate course.
40. Delhi Polytechnic —3 years.
41. Navsari Technical Institute, Navsari—3 years—Certificate.
42. K. C. Engineering Institute—Vishnupur —3 years—Diploma.
43. Jalpaiguri Polytechnic, Jalpaiguri—3 years—Diploma.
44. Hooghly Institute of Technology—Hooghly—3 years—Diploma.

SCOPE

Junior Field Officers (tools) in the Development wing under Ministry of Commerce and Industry: Asst. Marine Engineers in Harbours.

Section Officers in Provincial and Central Public Works Departments, Inspectors of Weights and Measures, Industries Departments, Teaching Inspectors, Mechanical Assistants in Technical Institutes, Engineering Supervisor in Indian Post & Telegraphs Departments.

As Asst. Mechanical Cultivation Engineers in the Agricultural Service of Bombay and other Govts.

As Asst. Foreman in Machine Tool Prototype Factories.

Note (1) Matriculates could work in the workshops of the Southern Railways as Apprentices and take part time course with the Polytechnics for five years. At the successful end of this course and training they can join the railway service. For this the candidates should apply to the Joint Service Commission of the Railways.

(2) The candidate in addition to his diploma could obtain the professional qualification if he passes the exams. of the Institute of Engineers (India) No. 8, Gokhale Road, Calcutta.

(3) Matric. passed students could take the associate membership exam. of the India Society of Engineers at 12, Netaji Subhas Road, Calcutta 1.

(4) The mechanical engineer can further specialise in cycle manufacture (as in T. I. Cycles India Ltd. at Ambatur) or in manufacture of pumps (as in P. S. G. factory at Coimbatore) or in the manufacture of small tools for agriculture.

Note (5) After a diploma in Mechanical Engineering the candidate may take the exams. of the Institute of Heating and Ventilating Engineers, 75, Eaton Place, London S. W. 1. A centre could be arranged in India if there are sufficient number of candidates.

(6) After Mechanical Engineering diploma, one can usefully pass the exams. of the Institute of Production Engineers, 36, Portman Square, London. Centres could be arranged in India. A fully qualified production engineer may ultimately fill such posts as Works Director, Technical Representative, Works Manager, Production Manager, Planning Engineer, Plant Engineer, Technical Journalist or obtain commissions in technical branches of armed forces. *Local Centre:*— The Hony. Secretary, The Institute of Production Engineers, c/o. Machine Tools (India) Ltd., Wilson Road, Ballard Estate, Bombay.

(7) Diploma holders in Mechanical Engineering are eligible to appear for the first and second class proficiency exams. in Boiler Engineering.

4-1. Mechanical Draughtsman's Course

Duration—2 years—at Sir Cusrow Wadia Institute of Electrical Technology—Poona.

4-2. *Mechanical Apprentice :*

Two years courses, Certificate Minimum qualifications, III Form Pass.

School of Ratnagiri, Ratnagiri.

M. H. S. S. Technical Institute, Byculla, Bombay.

V. J. Municipal School, Poona.

School of Industry, Sholapur.

School of Industry, Satara.

School of Industry, Hubli.

Navrasi Technical Institute, Navrasi

P. K. Kotawala Technical Institute, Patan.

King Edward Technical School, Dhulia.

F. S. P. Technical Institute, Surat.

Morvi Technical Institute, Morvi.

5. Mechanical And Electrical Engineering Combined Courses.

The following institutions have combined courses:-

1. Technical College-Dayalbagh, Agra,—Diploma-4 years.
2. Govt. Technical Institute, Gorakpur—Diploma-3 years.
3. Govt. Technical Institute, Jhansi,—Diploma-5 years.
   The course is especially for G. I. P. Railway apprentices.
4. Govt. Technical Institute, Lucknow—Diploma -5 years.

5. Technical College, Jodhpur, Certificate—5 years.
6. Kanchrapara Technical School, Kanchrapara, certificate—5 years
7. Calcutta Engineering College, Ballygunge, Calcutta,—Diploma 3 years-and certificate 2-years.
8. College of Engineering, Poona,—Diploma4 years.
9. Tirhut School of Engineering, Muzaffarpur—3 years.
10. B. V. Bhoomradi College of Engineering, Hubli—4 years.
11. Birla Engineering College, Anand—3 years.
12. Morvi Technical Institute, Morvi—3 years.
13. Technical College Dayalbagh, Agra—4 years.
14. National Institute of Engineering, Hoshiapur—4 years.
15. Osmania Technical College, Hyderabad—4 years.

Note :—The Central Railway Service Commission takes apprentices for signal and block inspectors from candidates who have a diploma in electrical and mechanical engineering. The age limit is between 18 and 22. Applications for such apprenticeship should be addressed to Secretary, Central Railway Service Commission, Churchgate, Bombay 1. Applications should be sent after due advertisements have appeared in the press. Recruitment is also done for Sub-station Asst. operators, Railways.

Documentary Films :

Useful in this connection is the Govt. of India's "Story of Steel" and the 'Iron Horse.'

6. Sound Engineering.

Sri J. Occuptional Institute, Bangalore. St. Xavier's College Technical Institute, Bombay—3 years-Diploma.

SCOPE

Studios, Govt. of India News and Publication Division.

7. Fire Engineering.

With the growth of large cities and the increasing use of power in the form of electricity and gas the profession of fire engineers is having scope. At present the important cities in India are having fire services. The graduateship and associateship exams. are held by the Institute of Fire Engineers, 2, Millbank House, Great Peter St., London S. W. 1. Overseas memberships are allowed by this institute.

8. Sanitary Engineering.

With the growth of public services, municipalities and corporations there is much need of qualified sanitary engineers.

The Institutions are :—

(1) Central Polytechnic, Madras—3 years.

(2) Occuptional Institute, Bangalore—3 years.

(3) V. J. T. Institute, Bombay—4 years.

SCOPE

Asst. Sanitary Inspectors or Sanitary Inspectors in Railways (Age generally under 30).

License inspectors, District boards and Municipalites, Corporations.

Asst. Water and Drainage Inspectors, Railways.

9. Internal Combustion Engineering.

Diploma-3 years at S. N. Parekh Parsee Polytechnic, Surat
Bhavasinhjee Polytechnic, Bhavanagar.
There is a certificate course also for V form passed boys.

9.-1. Electrical Communication Engineering.

College of Engineering, Poona, Duration 3 years.

10. Foundry Engineering.

Four years course—at Govt. Technical Institute, Ambala.

SCOPE

Ferrous and non-ferrous foundries.

10.-1. Pattern Makers.

Four years course-at Govt. Technical Institute, Ambala.

SCOPE

Foundries, Mints and Presses.

10.-2. Assemblers.

Four years course-at Govt. Technical Institute, Ambala.

SCOPE

Factories, Foundries, assembly shops and repair sheds.

11. Radio Engineering.

INTRODUCTION

Radio Engineering is a growing industry in India and involves an interesting career in manufacture of radio parts, assembling and maintenance.

INSTITUTES

Regular courses are available in the following Government Institutes :—

1. Rampur Government Polytechnic, Rampur.
2. Sir Jayachamarajendra Occupational Institute, Bangalore.
3. Sir Jayachamarajendra Occupational Institute, Diploma—3 years and certificate course 2 years.
4. Arthur Hope Polytechnic, Coimbatore—3 years—Radio servicing and maintenance—certificate course.

Besides these there are a number of private schools some of which are given below. They issue Govt. recognised diploma in radio servicing and maintenance.

5. Radio Electrical Institute, Lamington Road, Bombay.
6. Bombay Technical Institute, Byculla, Bombay.
7. St. Xavier's Technical Institute, Bombay—General Radio Physics, Electrical Technological Course—1 year. (2) Radio Servicing Course—day time—2 years. Evening Session—2 years. (3) Wireless Telegraphy—2 years.
8. V. S. Rajagopalan's Institute, Mount Road, Madras.
9. E. M. F. Radio class, Lamington Road, Bombay.
10. Khalsa College, Bombay Technical Institute, Bombay.
11. Radio class attached to V.J.T., Bombay.
12. George Telegraph Training Institute, 136, Bow Bazar St., Calcutta-12, 12 months.
13. S. P. School of Radio Physics and Electronics, Poona-2—12 months.
14. Morvi Technical Institute—one year course.

PROFESSIONAL INSTITUTE

The British Institute of Radio Engineers, 9, Bedford Square, London W.C.1. The grades of membership are student, graduate, associate, member and companion. The examination could be taken in India at Agra, Bombay, Calcutta, Delhi, Lucknow, Madras, Mysore and Trichy. Candidates who qualify with a certificate in radio service may be helped to set up independent business by the U.S. firm, Radio kits, incorporated, 120, Cedar St., New York, U.S.A.

The Govt. Telegraph College, Bow Bazar, Calcutta trains candidates for Radio Officers' posts and qualify them for Govt. of India first class and second class certificates. Before a certified candidate

can be appointed as the Radio Officer on a ship, three months pre-sea training as a Radio Officer is necessary. Only two ships on the Indian register " Jalaazad " and " Jalbihar " have accommodation for two Radio Officers.

SCOPE.

Could be found in as Radio Supervisors in the Broadcasting Service; in the Aeronautical Radio Organisation in the Civil Aviation Directorate; Police Radio Supervisors.

12. Telegraphy.

The George Telegraph Training Institute, 136, Bow Bazar St., Calcutta-12 has the following courses :—

Telegraphy (Railway Standard) 9 months.
Telegraphy (Postal Standard) 12 months.
There are also combined courses with Railway traffic.
Typist Signaller—3 months.
Wireless Telegraphy—16 months.

SCOPE

Indian Railways and Indian Postal Service.

The Director-General of Indian Posts and Telegraphs issues the following certificates as a result of examinations :—

1. First class Radio Telegraph Operator's Certificate (International).
2. Second class Radio Telegraph Operator's Certificate.
3. Radio Telegraph Operator's Special Certificate.
4. Radio Telephone Operator's Certificate (General).
5. Radio Telephone Operator's Certificate (Restricted).
6. The Non-commercial Radio Telegraph Operator's Certificate.

The Institutes at Madras for Wireless Telegraphy :—

(1) Raja's Telegraph and Wireless School, Vepery, Madras.
(2) Vincent's Technical Institute, Trichy.
(3) Institute of Radio Technology, St. Anthony's School, Tanjore.
(4) The Institute in Cochin is the Phonetic Commercial Institute which has four months training courses in Telegraphy, Radio Telegraphy and A.S.M. The Institute is at High Road, Trichur.

(5) S. P. College of Radio Physics and Electronics, Poona-2.

Note :—U.K. magazine "Wireless World" is useful to read for those further interested to know more about careers in this branch. The Journal of British Institution of Radio Engineers, U.K. is an useful material for students in this branch.

13. Radio Servicing.

One year course for matriculates at :—

(1) Institute of Radio Technology, Dadar, Bombay.
(2) Sir C. Wadia Institute, Poona.
(3) C. N. Industrial School, Ahmedabad.
(4) Wireless School, Nasik.
(5) Skyline Institute of Radio Electronics, Poona.
(6) A. V. Parekh Technical Institute, Rajkot.
(7) Paramount Radio Institute, Bombay.
(8) Radionic Institute, Nasik.

14. Wireless Telegraphy.

One year course for matriculates at :—

(1) St. Xavier's College Technical Institute, Bombay.
(2) A. V. Parekh Technical Institute, Rajkot.
(3) Radio Electronic Institute, Bombay.
(4) Sir C. Wadia Institute of Technology, Poona.

SCOPE

Signallers in Railways, Postal Service, All India Radio and Armed Forces.

Documentary Film of Govt. of India "The Voice of India" illustrates work on radios. Also the documentary 'Message in a moment' illustrate the scope of work for qualified men in this line. The documentary 'Over the wires' is a film on telegraphs in India. The documentary 'Number please' illustrates service in telephone departments.

15. Architecture.

INTRODUCTION

Architecture which is allied to engineering is increasingly coming into prominence with the present day emphasis on simple grace, harmony with landscape and allied subjects.

INSTITUTES

At present the following Institutions offer courses in this subject:—

1. Delhi Polytechnic—All-India diploma course—5 years—Matriculates with drawing and science will be preferred.
2. J. J. School of Arts, Bombay—Diploma—5 years—also evening classes are conducted.
3. Kalabhavan Technical Institute, Baroda—Diploma—4 years. Also a certificate course of 2 years.
4. Nagpur University—Diploma—4 years.
5. Govt. School of Arts and Crafts—5 years.

PROFESSIONAL INSTITUTES

Royal Institute of British Architects, 66, Portland Place, London W. 1. Architects Registration Council of U. K. 68, Portland Place, London W. 1.

RECOGNITION

The Govt. of India in consultation with the Union Public Service Commission have recognised the Indian National Diploma in Architecture as equivalent to Degree in architecture awarded by an Indian University or A. I. I. A. or R. I. B. A. Diploma for the purpose of direct recruitment to services and posts under the Central Government.

Note :—The Delhi Polytechnic has also a 7 years part-time course leading to the same diploma.

SCOPE

Private Practice; Also employment in House Construction companies and Govt. of India Public Works Departments as Junior Architects, Town Planning Officer, as Junior Architects, consulting architect to Provincial Governments, as Town Planning Architects class II.

The Professional Institute for landscape architecture is at 12, Gower St., London W. C. 1. Architects in India could take their examinations in India if approved by the institute.

The Incorporated Association of Architects and Surveyors has its Indian Branch at 24-26, Dalal St., Fort, Bombay-1.

16. The Town Planning Association.

At 11, Eliphinstone Circle, Fort, Bombay has a nine months training course on the above subject. This is useful for those who plan working in town and country planning departments.

Documentary Film of Govt. of India "Search for Shelter" illustrates house and town planning.

17. The Institute of Engineers, 8, Gokhale Road, P. O. Box 669 Calcutta-20.

The above institute is a professional one whose examinations are recognised by the Govt. of India and other agencies. The Institute holds (1) studentship examination (2) Associate membership examinations.

Briefly, Matriculates could take the studentship examination and three years after passing this may appear for the associate membership examinations. Exemption could also be secured from this examination for which the candidate must refer to their regulations.

For associate membership, a number of qualifications will entitle the candidate to appear for the examinations such as practical training, actual employment in engineering works or actual engagement on a course of study at an engineering college. For full particulars the candidates must write to the Institute for prospectus.

Exemption could also be obtained from sections A and B of this examination by degree holders in engineering for which the candidate is referred to the Institutes' list of recognised examinations.

Note:—Coaching for these examinations is offered by private institutes like B.I.E.T., Bombay and I.I.E.T. at Sir Muthia Chettiar High School, Madras-7 and Seshasayee Institute of Technology, Tiruchi.

18. The India Society of Engineers, 12, Netaji Subash Road, Calcutta-1.

Is devoted to the growth of engineering and science. It holds the examinations for conferment of memberships.

The class of memberships are: patrons, fellows, members, associate members, associates, graduates and students.

Matriculates are eligible to sit for the associate membership examinations. After passing the examinations candidates must spend at least two years in practical work in the fields of science, engineering or industry before they can become associate members. The examination is held once a year generally in April at Calcutta. The society publishes the journal "Science and Engineering" as well as text books for its examinations on engineering.

The examination for associate membership consists of compulsory papers in (1) Mathematics. (2) Applied Mechanics. (3) Physics. (4) Chemistry. Candidates must offer an optional from Civil, Mechanical or Electrical group. Students of the Society who have passed Intermediate examination of any Indian University are exempted from the compulsory papers.

19. City and Guilds Technological Examinations which could be taken in India.

The City and Guilds, London, conduct Technological examinations for benefit of those who wish to obtain qualifications to enable them to enter the industries. Separate sectional programmes are published for ten groups of subjects (a to j) :— (a) Chemical, Metallurgical and Allied subjects (b) Textile-subjects (c) Tele-communications and Electrical subjects (d) Mechanical Engineering and Allied subjects (e) Building subjects (f) Artistic crafts and Printing trade subjects (g) Miscellaneous subjects (h) Needle craft subjects (i) Cookery and Food Technology (j) Teacher's certificate in handicraft. The examination syllabus, previous years examination papers and other regulations can be had from the Director, Department of Technology, 3, Brechin Place, South Kensington, London, S. W. 7. The examination centres in India include the Central Polytechnic, Madras and V. J. T. Institute, Bombay.

STAGE I

CHAPTER—IV

THE SERVICES

CONTENTS

1. Note on opportunities in Police Service.
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3. Ordnance Factories.
4. List of Offices for Recruitment to Armed Forces.
5. Flying.
6. Merchant Navy.
7. Railway Service.
8. Community Projects.
9. Port Trusts.
10. Posts and Telegraphs.
11. Probation Guards.
12. Miscellaneous.

1. Note on Opportunities in Police Service.

The Police Department gives ample opportunities to the youths especially sportsmen, to lead an active life with good prospects by serving in the department in various capacities. The Madras Police Subordinate Service consists of the following categories of Officers :–

1. Inspector of Police.
2. Sergeant-Major.
3. Sub-Inspector of Police.
4. Sergeant.
5. Jamadar.
6. Head Constables.
7. Constables.

Appointment to the categories of Sub-Inspector, Sergeants, Jamadars and Constables are made by direct recruitments while appointment to the other categories are made by promotion from lower ranks. All directly recruited officers will be required to undergo training for periods ranging from six months to one year before they are appointed to the categories. The service is pensionable. An Officer is eligible for pension on his completion of his 55th year or on his completion of 30 years of qualifying service. Besides the pay fixed for them, all Police Officers are entitled for rent free quarters and other allowances. Officers who render meritorious service are suitably rewarded by promotion.

The general condition of services for the various categories of Officers are given below :—

1·1 Inspector of Police.

Appointment to this category is made by promotion from Sub-Inspectors of Police on grounds of merit and ability. He is eligible for promotion to the Provincial Services, viz., Deputy Superintendent of Police and other higher gazetted ranks in the Police Department.

1·2 Sergeant-Major.

Appointment to this category is made by promotion from the rank of Sergeants. The scale of pay and conditions of service are similar to that of Inspectors of Police. While the Sergeant-Major is in charge of a contingent Reserve Police the Inspector is in charge of Local Police Administration.

1·3 Sub-Inspector of Police.

Selections for appointment as Sub-Inspectors of Police will be held invariably every year. The minimum educational qualification required is a pass in the Intermediate Examination of a recognised University. In the case of Harijans it is enough if they are S.S.L.C. passed candidates with certain specified marks in the subjects. A candidate must have completed the age of 20 years and must not have completed the age of 25 years. A selected candidate will be required to undergo a course of training for a period of one year in the Provincial Police Training College, Vellore and thereafter Practical Training for one year and six months and during this period he will be placed in independent charge of Police Station for a period of not less than one year.

1·4 Sergeants.

Selection for appointment as Sergeants will be held every year. A candidate must have a pass in the S.S.L.C. Examination with certain number of specified marks in the subjects. He must be over 21 years and under 25 years. A Selected candidate will be required to undergo a course of Training for a period of 12 months in the Malabar Special Police, Malappuram and thereafter he will be posted to an Armed Reserve.

1·5 Jamadars.

Selection for appointment as Jamadars will be held as and when vacancies arise. A candidate must have studied upto S.S.L.C. He must be over 18 years of age and must not have completed 25 years of age. A selected candidate will be required to undergo Training for a period of six months in the Malabar Special Police.

1·6 Head Constable.

Appointment to this category is made by promotion from the ranks of Constables on grounds of merit and ability.

1·7 Police Constable.

Appointments are made by direct recruitment. Selection will be held every week and candidates are selected according to the vacancies existing then and there. A candidate must have studied upto VI Standard or I Form. He must have completed 18 years of age and must not have completed 25 years of age. A selected candidate

will be required to undergo Training for a period of not less than six months in a Police Recruit School. After completion of Training he will be posted to some Police Station.

Documentary Film of Govt. of India 'Portrait of a Policeman' can be seen for ideas on this career.

2. ARMED FORCES

2·0 The Joint Services Wing at the National Defence Academy provides an opportunity to any young man who wishes to have a career in the Armed Forces. Here cadets from the three services receive identical pre-commission training for a period of two years. Courses at the J.S.W. start in January and July. Competitive entrance examinations for these are conducted by the Union Public Service Commission at various centres in India six months before the commencement.

The age limits for Army and Air Force are 15–17½ and for Navy 15–17 on the first day of the month in which the course is scheduled to commence. Those who have appeared for their matric. and whose results have not been announced can also apply. Candidates must be unmarried.

The following are the places from which application forms could be had :—

The Secretary, U. P. S. C., Parliament House, P. B. No. 186, New Delhi.

The nearest Air Force or Army Recruiting Centre.

The examination will include the following subjects :

1. English.	300 Marks.	2½ hours.
2. General Knowledge and current affairs.	do	do
3. Mathematics I.	150 Marks.	2 hours.
4. Mathematics II.	do	do

The standard of the examination will be similar to that of Matriculation.

2·1 National Defence Academy Military Wing.

There is also direct entry into this two years course.

The age limits are :—

Civilians 18–21, Army personnel 18–24, N.C.C. cadets 19–21 and educational qualifications required are :—Civilians–Inter. Army Personnel–Matric. N.C.C. cadets–B. A., Candidates except N.C.C cadets are required to take entrance examinations. To be eligible N.C.C. cadets must have served for not less than 3 years in the Senior Division of the N.C.C. and must be in possession of a 'C' certificate. His application must be submitted to the Adjutant General's Branch, Army Headquarters, through Officers Commanding, N.C.C. unit and N.C.C. Directorate, Ministry of Defence. Period of training is two years. For N.C.C. cadets the period is one year.

2·2 Nursing Service.

Opportunities for women looking for a nursing career are provided in selected military hospitals. Age limits are 18–30, and minimum qualification is matriculation or equivalent standard. The course is three years and a stipend is paid to the selected candidates. Applicants should be unmarried.

2·3 J. C. O's and other ranks.

The army has Junior Commissioned Officers, Non-commissioned Officers, Sepoys and Boys. No direct recruitment is made to J. C. O's but intelligent Sepoys are given a chance for promotion. Age limits are under 24.

2·4 Trade Training.

The army has eight major groups of trades and youngmen entering the army could learn the trade and obtain promotions when vacancies occur. Free rations, clothing, and medical aid are given to all recruits. For categories of trade and pay the candidates may contact the nearest army recruiting office.

2·5 Indian Navy.

Service in the Navy offers a career full of interest to those youngmen who have the liking for it. Within the service there is wide scope in a variety of trades and work.

Cadet entry into the navy is of two types :—the Joint Service Wing and special entry. Cadets, after two years training at the Defence Academy are sent to U. K. for a four to six years training.

2·51 The I.N.S. "Shivaji" is a Mechanical Training Establishment at Lonawala near Bombay. Admission to the course is by competetive examinations. Such trades as Coppersmithing, Boiler Engineering and Engine maintenance are taught there.

Candidates for this examination must have studied science subjects upto matriculation standards :—

Physical :	Height	5′
	Chest	29″
	Weight	94 lbs.

Normal vision is essential and glasses will not be worn.

Age limits 14–17.

The exam. is normally held in November and candidates may apply to the nearest recruiting office. Successful students will be trained as artificer apprentices to fill vacancies as:—Engine room Artificers, Shipwright Artificers, Electrical Artificers, Ordnance Artificers, Aircrafts Artificers, Electrical Artificers (air), Radio Electrical Artificers (air). There will be a four years training period during which allowances would be paid, together with free clothing, food and lodging.

2·52 The I.N.S. 'Circars' at Vizag recruits boys between 15½ to 16½ years of age for training as Sailors and Artificers. The minimum physical standards on attaining age of 18 are :—

Height	5′ 4″
Chest	33½″
Weight	115 lbs.
Eye sight (Both eyes)	6.6

Selection is based on competitive examinations.

2·6 Dockyard School.

The Dockyard School in Bombay trains apprentices in various aspects of Dockyard Technical Work. Age limits 16–19 and recruitment is made on the basis of competitive examinations in June every year. The period is five years and a stipend is allowed for the trainees. Apply to nearest recruiting office.

2·7 Air Force.

There is also good opening for youngmen to join the Air Force as Air-men. They are taught varied Technical and Non-Technical trades free. Age limits are 17–22. The physical standards are :—

Height	5′ 6″
Chest	32″
Weight	105 lbs.

and eyesight should be good. Candidates are admitted after a test. Categories of trade and pay can be obtained from the nearest recruiting office of the Air Force.

The Technical Training College, Jalahalli takes matriculates between 15–17 age limits for two years Training in Technical trades ; after two years they are given practical Training in Air Force Units ; they are trained to be fullfledged Air-men Technicians.

3. ORDNANCE FACTORIES

3·0 Young boys above 14 can take up apprenticeship and training in the various Ordnance Factories. They can enter as artisans, skilled workmen or apprentices.

The Machine Tool Prototype Factory at Ambernath near Bombay has a scheme for special artisan training scheme for boys between 14 and 17 who have passed Matriculation. The Trades Training lasts five years with two years work at the Machine Tool Factory.

3·1 LIST OF THE ORDNANCE FACTORIES

Training Scheme.	Factory.	Location.	Authority to whom Application should be addressed.
Boy artisan to be trained as skilled workmen.	Metal & Steel Factory.	Ishapore.	Superintendents of the Factory.
	Rifle Factory.	,,	,,
	Gun & Shell Factory.	Cossipore.	,,
	Ammunition Factory.	Kirkee	,,

Training Scheme.	Factory.	Location.	Authority to whom Application should be addressed.
	Ordnance Factory.	Ambarnath.	Superintendent of the Factory.
	Gun carriage Factory.	Jubbulpore.	,,
	Ordnance Factory.	Katni.	,,
	Ordnance Factory.	Kanpur.	,,
	Ordnance Factory.	Muradnagar Delhi.	,,
	Ordnance Factory.	Dehra Dun.	,,
	Cordite Factory.	Arvenkadu.	,,
	Small Arms Factory.	Kanpur.	,,
	Harness and Sadlery Factory.	Kanpur.	,,
	Clothing Factory.	Shajahanpur.	,,
	Ordnance Parachute Factory.	Kanpur.	,,
	Ordnance Factory.	Wadala Bombay.	,,
	Ordnance Factory.	Bhusawal Bombay.	,,
	Workmen unskilled to semi-skilled and skilled.	All the above Factories according to requirements of the Factories.	Apply to Superintendent or officer-in-charge of the Factories Concerned.

Training Scheme.	Factory.	Location.	Authority to whom Application should be addressed.
Apprentice.	Gun-carriage Factory.	Jubbulpore.	Director General of Ordnance Factories, 6, Esplanade East, Calcutta.
	Rifle Factory.	Ishapore.	,,
	Gun and Shell Factory.	Cossipore.	,,
	Metal and Steel Factory.	Ishapore.	,,
	Cordite Factory.	Arvankadu.	,,
	Harness and Sadlery Factory.	Kanpur.	,,
	Clothing Factory.	Shajahanpur.	,,
Senior Draughtsman and Draughtsman.	All Factories as shown against Boy artisans except the High Explosive Factories and the last Factories.		,,
Assistant Works Manager.	All Factories as shown against Boy artisans.		Secretary, U. P. S. C., New Delhi.

4. LIST OF OFFICES, FOR RECRUITMENT TO ARMED FORCES

1. Headquarters, Delhi Cantt.

2. Headquarters, Sub-Area, Ambala/Bangalore/Bombay/Lucknow/Madras/Meerut/Poona/Jullundur.

3. Headquarters, Jubbulpore Indep. Sub-Area, Jubbulpore/Deccan Indep. Sub-Area, Secunderabad.

4. Headquarters, 201 Bde. Area, Jala Pahar/301 Bde. Area, Dinapore/202 Bde. Area, Calcutta.

5. Headquarters, 181 Indep. Bde. Group, Shillong.

6. Headquarters, Panagarh Base, Panagarh/Pathankot Base, Pathankot.

7. Administrative Commandant, Allahabad.

8. Recruiting Officer, Jullunder/Ambala/Ajmer/Lucknow/Calcutta/Poona/Bangalore/Patna/Nagpur/Kunraghat.

9. Commodore-in-Charge, Navy Office, Vithal House, Mint Road, Bombay.

10. Commodore-in-Charge, Cochin.

11. Naval Officer-in-Charge, Vizagapatam.

12. Resident Naval Officer, Madras.

13. Resident Naval Officer, Calcutta.

14. P.O. 3, Air Headquarter, New Delhi.

Air Force Recruiting Adjutants.

(a) I.A.F. Station, 17, Majumdar Lines, Church Road, Ambala Cantt.

(b) I.A.F. Station, Safdar Jung, New Delhi.

(c) No. 1 Base Repair Depot, I.A.F. Station, Chakeri, Kanpur.

(d) A.F.I. Building Hospital Lane, Dhobi Talao, Bombay-1.

(e) Headquarters, Trg. Comd. I.A.F. Inf. Road End. High Grounds, Bangalore Cantt.

(f) No. 2, Ground Training School, I.A.F. Station, Tambaram, Madras.

(g) No. 1 Gokhale Road, Calcutta-20.

Documentary Films : Illustrating aspects of training and life, in Armed Forces are the Govt. of India's films 'National Defence Academy', 'Our Navy', 'The Air Force', 'Our Territorial Army.'

(5) FLYING.

Healthy youngmen who are between seventeen and twenty-one are eligible to apply for pilots training with the Indian Air Force. The candidates will be subject to a competetive examination and a medical examination. They should apply to the Union Public Service Commission or to the nearest Air Force recruitment station.

The I. A. F. trains them to be pilots for military aircraft in the services. Those who hold fiying licenses may also join the Air Force Academy of the I. A. F. if they are under 24.

Those who wish to take up civil pilots training may obtain their training from (1) The Madras Flying club, Meenambakkam (2) The Flying Training School, Bhuvaneshwar Airfield, Bhuvaneshwar.

SCOPE

Civil pilots are engaged by air line companies: with good experience a civil pilot could become instructor at the Civil Aviation Training Centre, Allahabad.

The Certificates are :—

1. Indian Pilot's 'A' license.
2. Passenger Carrying Certifieate.
3. Commercial Pilots 'B' license.

Documentary Film: of Govt. of India " Men with Wings " illustrates the training and career of a fighter pilot.

There is practically no unemployment in Civil Aviation and the demand and supply are well balanced.

Civil Aviation in this country is still in its infancy and the future prospects for Civillan Pilots are bound to be even better than at present.

A professional pilot can serve in any of the eight or ten air lines operating in the country or open his own charter service or work as a free lance pilot and earn a decent living, after a training which does not take more than 18 months in average cases. The only qualifications required are a working knowledge of English and normal health and eyesight. The total cost of obtaining an amateur license comes to about Rs. 2,000 and the total cost of obtaining a professional license comes to about Rs. 6,000 in average cases.

Apart from Air Lines a professional Pilot might take up the career of a Pilot Instructor.

(6) Merchant Navy.

6-1. Lads between 15 and 17 and who have passed matric. may take up merchant navy career. For this one must obtain training

at the I. M. N. T. S. "Dufferin" Bombay which selects such candidates after a competitive test.

The cadets serve two year training at Bombay after which they have to do three year's apprenticeship on the seas when they may qualify for second mate's certificates. Dufferin cadets are also given appointments on shore jobs, in Harbour Master's Services, Dredger's Service, Hoogly, surveyors or pilots. Address: Captain Superintendent, I. M. N. T. S. "Dufferin" Magazaon Pier, BOMBAY-10.

6-2. Those who do not join the "Dufferin" could take up training with Scindia Navigation Company, provided they have put in two years of service in a sea-going vessel and provided they have passed Matriculation.

The Scindia Scheme for the engagement of non-Dufferin applicants for Merchant Navy Officers' Career, after requisite test.

Age : Applicants must be between 23-25.

Sea-experience : Two years.

Educational qualifications : Matriculation.

Eye-sight : Must have passed the eye-sight test of the Mercantile Marine Department.

Test by Nautical Adviser : Applicants will have a oral test by Nautical Adviser of the Mercantile Marine Department. On passing of this they will be subject to a written test. The applicant will then serve the company for at least three years after obtaining his B.O.T. and mate's ticket.

SCOPE

After passing final passing out Certificate in Engineering at Dufferin or 1st or 2nd class B. O. T. certificate : as commissioned officers in the Engineering and electrical branches of the Navy.

The following are some of the shipping companies :—

Scindia Steam Navigation Company, Scindia House, Ballard Estate, Bombay.

Indian Steamship Company Ltd., Lionel Edwards Ltd., D. I. Clive Building, Calcutta-1.

6-3. *Writer/Purser.* Training for career as writer/purser on board a vessal is undertaken at the head office of a shipping company. Age limit upto 23 years. Selected candidates will be given training in the accounts, crew, and stores departments.

6-4. *Deck and Engine Room Crews :* A Government scheme is in existence at Calcutta and Visakapatnam for training Indian seamen as merchant ship crew. The training is done on the ships " Bhadra " and "Lady Fraser".

Note :—For persons employed in shipping business the associate membership of the Institute of Charted Ship Brokers, 57, St. Mary Axe, London, E. C. 3 is an useful qualification for furthering their prospects.

6-5. *Sailors' Seamens, & Serangs'.* Marine College and Seamens' Orphanage, Novha (Bombay Harbour) has a two year course leading to the Bombay Government certificate.

6-6. *Ministry of Transport Examinations :* Information on the examinations of the Ministry of Transport for issue of marine certificates is contained in the official publications 'Rules relating to the Examination of Masters and Mates in the Mercantile Marine for Colonial and Home Trade Certificates of Competency'. A copy of this could be obtained from the Manager of Govt. Publications, New Delhi. Further information on the subject can also be obtained from the Principal Officer, Mercantile Marine Dept., Old High Court Buildings, Post Box 268, Madras or from the Chief Examiner of Masters and Mates, Commerce House, Currimbhoy Road, Ballard Estate, Fort, Bombay.

The Documentary Film : of Govt of India 'Sailors of Tomorrow' illustrates training in this field. Another useful film is the 'River Boats of Bengal'.

(7) Railway Service.

Matriculates can take up Apprentice Asst. Permanent Way Inspectors (Western Railways), Firemen Grade 'A' Railways, Mechanics-Railways (some knowledge of free hand drawing essential) — Candidates should apply to Railway Service Commission, Churchgate, Bombay-1 whenever advertisement occurs. Age limits generally 16 years.

Matriculates can join Railway Service as Office clerks, Ticket collectors, Relieving pay clerks, Signallers, Stenographers, Typists

Tracers, and Despatch riders, Age limits generally 18–25. Applications may be had from Station masters of principal Railway Stations.

Matriculates with agricultural experience may be taken as Fieldsmen in the Indian Central Coconut Committee Research Station. Kasargod.

(8) Community Projects.

Matriculates are taken as village level workers after a six months special training at centres of Palgat, Gandhigram, Kallupatti and Samalkot. Apply: Director of Community Projects, when advertise ments occur. People with higher qualifications are taken as Supervisors.

(9) Port Trust.

Matriculates are taken as clerks in the Madras Port Trust and other Port Trusts, in the Medical, Traffic and other departments.

(10) Posts and Telegraphs.

The Office of the Deputy Accountant General, Posts & Telegraphs takes Matriculates who have obtained over 56% in the aggregate marks as Lower Division Clerks. Apply Deputy Account General, Posts & Telegraphs, when advertisements occur. Also this office takes sorters.

(11) Probationary Gaurds.

Matriculates between 18 and 25 are taken as probationar gaurds, in the Railway service. Selected candidates will undergo training for three months before being employed in the railways. Apply Railway Service Commission, Bombay whenever advertisements occur.

12-1. Matriculates with a pass in Book-keeping, co-operation, and auditing held by the Govt. Institute of Commerce, Madras or any other recognised institute may be appointed as *co-operative supervisors* by *co-operative banks*.

12-2. Matriculates are also taken in the provincial Educational Service Film Libraries and Audio Visual Aids Libraries. Apply Deputy Director of Public Instruction, Govt. of Madras.

12-3. Matriculates are taken as social education organisers in the Community Projects of different States.

12-4. Matriculates are taken as stenographers in the Railway Audit Service.

STAGE I

CHAPTER—V

PUBLIC EXAMINATIONS

CONTENTS

1. Madras Public Service Commission Examinations.
2. Posts and Telegraphs.
3. Village Vaidya.
4. Health Visitors Certificate.
5. Languages.

I-1. The Madras Public Service Commission.

Draws up a list of approved women candidates for appointment to various vacancies in the ministerial services. Age limits: under 25.

The competetive examination for applicants for post for clerks will consist of a written test of S.S.L.C. standard. The examinations consists of (1) an Essay paper in English and regional language (2) Precis-writing in English (3) General knowledge (4) Translation.

The competetive examination for typists will consist of an Essay paper in English and regional language of S. S. L. C. standard.

The competitive examination for general services other than the above will offer (1) Essay (2) Precis-writing (3) General Knowledge and (4) Translation where there are higher minimum percentages.

Full particulars and details could be had from the Madras Public Service Commission, Madras.

I-2. The Madras Public Service Commission draws up separately for the Madras Secretariat Service, the Madras Ministerial Service, and the Madras Judicial Ministerial Service, a list of approved candidates for appointment by direct recruitment as and when vacancies occur. The examination will consist of (1) Essay paper (2) A paper in precis-writing (3) A paper in General Knowledge (4) Translation paper. The standard is that of S.S.L.C. Candidates should apply to The Public Service Commission, Madras after due advertisements are made in the press.

The Madras Public Service Commission also draws up a list of successful candidates for posts of typists and steno-typists to be employed in the different services of the state. The list will be the result of an examination conducted by the Government.

SCOPE

Candidates who pass the examinations of M.P.S.C. are employed in Provincial Govt. Service in various branches. They can further their chances of promotion by passing Departmental Examinations.

II. Posts and Telegraphs.

A Competetive Examination for recruitment to certain subordinate services of the Indian Posts and Telegraphs Departments is generally held at various centres like Mysore, Hyderabad and Madras. Age limits 17–23. Applications for admission to the examinations should be made to the nearest Post-Master General's Office of the province—For Madras, apply to the Post-Master General, Mount Road, Madras.

The services are :—

1. Telegraphists.
2. Telephone Operators (Women not eligible).
3. Clerical Service in Post Office.
4. Railway Mail Sorters.
5. Clerks in Dead Letter Offices.

II-1. Mechanics.

The Posts and Telegraphs Department recruits mechanics by a competitive examination for apprentices and qualified candidates.

Qualified candidates: Diploma of a vocational or industrial institute. Age 20-24.

Apprentices : Vernacular final examination or eighth class—Age 16-19. Applications and prospectus from—Divisional Engineer, Madras, Trichy, Bangalore and Hyderabad.

SCOPE

Those who have passed shorthand in languages (higher grade) may find scope as reporters to papers in the Secretariat of the legislatures in the Ministerial service of the provinces.

II-2. Note : The office of Deputy Accountant General also recruits lower division clerks for Posts and Telegraphs. For this candidates must have passed Matriculation in first division or obtained over 56 (percent) in aggregate marks in S.S.L.C.

II-3. For sorters recruitment in the same office literacy, in English is a sufficient qualification.

III. Village Vaidya.

The Govt. of Madras has a scheme of Education and Training for six months for qualification as Village Vaidyas. Elementary knowledge of medicine and first aid are taught. Candidates should

apply to the Village Vaidya Honorary Director, Madras-10. for forms and conditions. Candidates who successfully undergo the course and pass the examinations will be awarded a Govt. certificate.

IV. Health visitors certificate course.

The Govt. Training School for Health visitors at Montford House, No. 1 and 1.A, Monteith Lane, Egmore, Madras has an 18 months course leading to the certificate of health visitors issued by the Provincial Government. Candidates must be S.S.L.C. passed ; they must also be Diploma holders in Midwifery. Candidates should apply to the Director of Public Health, Poonamalle High Road, Kilpauk, Madras.

LANGUAGES.

V-1. Chinese.

There is a Diploma course in Chinese at the Benares Hindu University—duration 2 years. Also at Cheena Bhavan, Shantha-niketan.

V-2. Hindi.

All examinations conducted by the Hindi Pracharak Sabha are generally held in August and February.

The Examinations are :—

1. *Prathmic*—this is the first Examination in Hindi.

2. *Madyama*—To appear for this Examination one generally has to pass Prathmic. Candidates can also take this Examination directly.

3. *Rashtrabasha* :—Candidates must either have passed Madyama or Srikrith Samaksha Examination of Sabha. Those who have offered Hindi Part II in Inter are also eligible to appear.

4. *Pravasika* :—Candidates must have passed Rashtrabasha or passed B. A. Part II Hindi. Candidates must offer one paper in another Indian language than Hindi. There is also a viva examination.

5. *Visharad* :—After passing Pravasika the candidate should attend Hindi Classes for one year before entering for this examination. There is a viva voce examination and candidates should offer a paper on another Indian language besides Hindi. Age should be above 16.

For further particulars regarding details candidates should address the Dakshina Hindi Pracharak Sabha, T. Nagar, Madras-17.

V-3. Diploma in German and French.

There is a two years course at the Osmania University leading to a Diploma.

V-4. One year Certificate course.

At Punjab University in Punjabi, Hindi, Urdu.

SCOPE

Knowledge of Hindi and passing of these Examinations is an useful qualification for teaching, translator's work in Govt. offices, business and law courts. Also knowledge of German and French is often required for scholarships offered by those countries.

Note:—For other foreign languages there is the Correspondence Institute, Linguaphone Institute, Linguaphone House, 207, Regent Street, London W.1.

STAGE 1

CHAPTER—VI

TECHNOLOGY

CONTENTS

1. Fisheries Technology.
2. Printing Technology.
3. Mining.
4. Chemical Technology.
5. Soap Technology.
6. Chemical Engineering.
7. Food Technology.
8. Metallurgy.
9. Oils, Soaps and Paints Technology.
10. Piants Technology.
11. Leather Technology.
12. Textile Technology.
13. Film Technology and Photography.
14. Silk Technology.
15. Further Course for Sanitary Inspectors.
16. Occupational Therapy.

TECHNOLOGICAL COURSES PREPARING FOR CAREERS IN SPECIFIED FIELDS

1. Fisheries Technology.

INTRODUCTION

Technical Training in Fisheries is a good qualification for employment in the Fisheries Department, the Liver oil extracting Companies and the various Industries associated with it.

INSTITUTES

Institutions where training could be obtained are :—

(1) Andhra Polytechnic—Cocanada—Diploma Course—Three years.

(2) Central Polytechnic—Madras ,, ,, ,,

This course includes Navigation also. S.S.L.C. candidates must have passed with Physics, Chemistry, Botany or Zoology as optional subjects.

(3) Govt. Polytechnic,—Kalamasseri—3 years—Diploma—Travancore University.

SCOPE

Qualified youngmen in this subject can seek a career in the Department of Fisheries, Govt. of Madras. They may apply to the M. P. S. C. when advertisements are made in the press.

Documentary Film of Govt. of India 'Harvest from the Sea' highlights this branch of activity.

2. Printing Technology.

INTRODUCTION

Training in Printing Technology is useful in careers as Technicians in Printing firms, Newspaper Offices, Map makers, Publishers and various allied industries both Governmental and private.

INSTITUTES

Institutions where such facilities for training are available are :—

1. Central Polytechnic, Broadway, Madras—Diploma—full time 3 years.
2. Jayachamarajendra Technical Institute, Bangalore.

Diploma course—Three years.

Certificate course—Two years.

APPRENTICESHIPS

Apprenticeship may also be secured at :—

G. Claridge & Co., Caxten Press, Frere Road, Bombay ; New Jack Press, Bombay ; Associated Printers, Mount Road, Madras; J.C.P. Press, Joint Cipher Bureau of the Ministry of Defence also employs qualified printers in higher services.

The following is a brief list of workshops suitable for Training :— Addison Press, Alliance Press, " Ananda Vikatan " Press, Associated Press, Bharathi Vijayam Press, Caxton Press, Central Art, Devi, Diocesan, Famous Printers, Giri Press, Good Pastor Press, Govt. Press, " Hindu " Press, Hindustan Prachar Press, Hoe & Co., Indian Express, Jupiter, Kalki, Kapali, Kesari Printing, Madras Law Journal Press, Madras Publishing ouse, " Mail " Southern Railway Press, G. A. Natesan Press, Newman Press, Pathy Press, Prabhat Industries Press, Prema Press, Solar Printing Press.

A full list of approved Presses in the Province can be had from the Office of the Director of Industries and Commerce.

SCOPE

The youngman qualified in Printing Technology may obtain apprenticeship with Printing Presses of Publishers, Newspapers and the Government. The Government of India Central Press, usually, takes apprentices every year. The selection is made by the Controller of Printing and Stationaries, Govt. of India.

Asst. Production Officers in the Publications Division of Ministry of Information and Broadcasting; overseers in Govt. Presses; Asst. Superintendents, Govt. Press, Provincial Stationary and Printing Service, Nasik Press.

Note :—There is a five years course at the Govt. School of Arts and Crafts, Lucknow on Art Printing, and Photo Mechanical Process.

Some of the Jobs for Printing Technology qualified Candidates.

Composers, Letter Press Machine Operators, Lithographers, Sterotypers and Electrotypers, Book binders, Printers' ware house keepers, Machine Rulers, Printing Designers, Linotype and Inter type operators, Monotype keyboard Operators, Monotype casters, Printers, Readers, Typographical layout, Platen Machine Operators, Rotary Press Operators, Photogravine Workers, Press Proof Readers,

Printers Assistants, Printing Machine Constructors, Metallurgists, Printing Ink Controllers, Book Binding Designers and Finishers, Stationers Assistants, Intermediate and Senior order Clerks, Estimaters, Printer's Salesman, Advertisement Writers and Designers.

Professional Institute:—Association of Master Printers, Bombay. Also the Society of Lithographic Artists, London.

3. Mining.

In India Mining is a growing Industry both as surface Mining (like mica) and deep Mining as Coal. Qualification in this line could be obtained at the Jayachamarajendra Occupational Institute, Bangalore, which offers a Diploma Course of 3 years in duration.

4. Chemical Technology.

Chemical Technology is the study of large scale Manufacture and use of Chemicals from the Laboratory stage. The Institutions avilable are:—Government Central Textile Institute, Kanpur—4 years—Diploma—as well as a 2 year's Certificate Course in Textile Chemistry only.

1. The Institute of Textile Technology, Trivandrum—Diploma—4 years—Textile Chemistry.

2. Kalabhavan Technical Institute, Baroda—Diploma—3 years.

3. V. J. T. Institute, Bombay—Diploma—4 years—(Entrance Test to be taken by Students.)

5. Soap Technology.

The Kerala Soap Institute has Chemical Technology Course in Soap Technology. Candidates who have connections or experience with Soap Industries will be given a preference. Fees will be Rs. 100 per annum and the duration is one year. The training will be of practical nature on the Manufacture of Soaps. A Certificate will be issued to the Candidates on successful completion of the Course. The address of the Institute is the Kerala Soap Institute, Kozhikode.

6. Chemical Engineering.

Govt. Polytechnic, Kalamasseri, 3 years Course for Diploma of Travancore University.

7. Food Technology.

1. Govt. Polytechnic, Kalamaseeri, 3 years Course for Diploma of Travancore University.

2. Kerala Polytechnic, Kozhikode—3 years—Diploma Course.

8. Metallurgy.

Diploma Course in Metallurgy :

College of Engineering, Poona. Duration 3 years.

9. Oils, Soaps and Paints Technology.

Three years—Diploma—at Bhavasinghjee Polytechnic Institute, Bhavanagar.

10. Paint's Technology.

Two years Course at D. E. Society's Technical Institute, Poona.

11. Leather Technology.

INTRODUCTION

India has a large Leather Industry exporting processed leather to western countries. It also has a large internal trade in Leather goods.

INSTITUTES

Technical Training in this subject could be obtained in the following Institutions :—

1. Technical College, Dayalbagh, Agra—Certificate—2 years.

2. Institute of Leather Technology, Madras-21. (Kathivakkam High Road, Madras.)—Diploma—3 years. 1 year Apprentice Training.

3. Candidates for admission to this Madras Institute must have passed Matric. with Chemistry as Optional. For Certificate Course a pass in third form in necessary. Besides these Courses there is also an artisan course of two years in this trade open to Harijan boys of Shoe-makers' community of not less than fourteen years of age. Stipends of Rs. 25 per month will be paid to the students of this class.

4. Govt. Leather Working School, Bandra, Bombay—Diploma—2 years.

5. Govt. Tanning Institute, Bandra, Bombay—Diploma—2 years.

For the Diploma Course three scholarships of value of Rs. 30 per mensem will be awarded to students of each class of the Diploma Course. The session starts in July and ends in April with a break in December.

Candidates taking Leather Technology Course could also take City and Guilds Examinations on this subject. For this they must apply to Polytechnics in this country.

SCOPE

Footwear Manufacturers like Batas at Batanagar near Calcutta and Amritsar take a number of qualified men in this field.

11·1 Advanced Leather Manufacturing.

At Govt. Tanning Institute, Bandra—two years.

11·2 Artisan's Leather Manufacturing.

At Govt. Tanning Institute, Bandra, two years—literacy sufficient.

11·3 Advanced Leathergoods and Footwear Manufacture.

At Govt. Leather Working School, Bandra.

11·4 Artisan's Footwear Manufacturing and Artisan's Leathergoods Manufacture.

Govt. Leather Working School, Bandra.

13. Textile Technology.

INTRODUCTION

Textile Technology is a necessary qualification for youngmen who wish to enter these National Industries at important Textile Towns like Ahmedabad and Coimbatore.

INSTITUTES

The following are the Institutions available for the course:

1. Delhi Polytechnic—Diploma—three and half years.
2. Delhi Polytechnic—Certificate—three years.
3. Govt. Central Textile Institute, Kanpur—Diploma—4 years.
4. Govt. Central Weaving Institute, Banaras Cantt.—Diploma—3 years.
5. Punjab Institute of Textile Technology, Amritsar—Diploma—3 years.
6. Sri Krishnarajendra Silver Jubilee Technological Institute, Bangalore. Diploma—2½ years.
7. Govt. Textile Institute, Madras—Diploma.
8. Bengal Silk Technological Institute, Berhampore—Bengal—Diploma.
9. Institute of Textile Technology, Diploma—3 years.
10. V. J. T. Institute, Bombay—Diploma—4 years.
11. V. J. T. Institute, Bombay—Certificate—2 years.

12. Kalabhavan Technical Institute, Baroda—Diploma in Weaving Technology—3 years.

13. R. C. Technical Institute, Ahmedabad—Certificate in Weaving and Spinning—3 years—Diploma 4 years.

14. The Textile Technical School, Bombay 12—Two years Course in Spinning and Weaving separately-open only for Mill operatives.

15. Artisan Course at Krishna Rajendra Silver Jubilee Institute, Bangalore : Duration one year subjects (1) Handloom Weaving (2) Powerloom Weaving (3) Dyeing and Printing (4) Hosiery. Instruction in Kannada.

Professional Institutes and Associations.

The following are some of the Associations in this Trade :—

1. Association of Merchants and Manufacturers of Textile Stores and Machinery, Wadia Building, Dalal St., Fort, Bombay.

2. Associated Textile Engineers, at Ahmedabad, Bombay and Coimbatore.

3. Institute of Art in Industry, 15, Park St., Calcutta—16. This Institute runs a Magazine "Art in Industry".

4. The Central Institute of Art and Design, London.

The other courses at Madras Textile Institute are :—

(1) Instructors Course in handloom Weaving—ten months to Train Teachers in this Art—no fees.

(2) Instructor's Course in hand processes of Bleaching, Dyeing and Clothprinting—ten months to train efficient Teachers for providing Instruction in the field. No tuition fees. Age—above 16 years—Three Scholarships.

(3) Special Courses for Weavers community—five months—Ages 20-30, no fees and liberal Scholarships.

(4) Special Course in Jacquard Weaving :—Five months. The Course is for Instructors and Teachers who have passed the Instructor's Courses. The Course is on Designing Artistic Fabrics, no fees. Five full Scholarships.

(5) Special Courses in Hand Processing, Bleaching, Dyeing and Cloth printing—five months, no fees. This is also an advanced Course.

(6) Special Course in Powerloom Weaving—3 months—the aim is to enable Handloom Operators to change to small Powerloom Operators wherever Electricity is available for Industrial purposes, no fees.

(7) Artisan Course in Knitting—ten months of Instruction and practical Training in Knitting of Socks, Stockings and Banians, no fees.

SCOPE

Textile Mills, Superintendents, Assistant Superintendents and Inspectors at Govt. and Private Hand Weaving Institutes, Weaving Assistants, Textile Designers, appointed in connection with the Govt. of India Marketing of Handloom products scheme, Textile Assistants at Technical Institutes. Lecturers in Textiles in Polytechnics.

13·1 Textile Apprentice.

There is a two year Course at V. J. Technical Institute, Bombay.

13·2 Textile Chemistry.

(1) R. C. Technical Institute, Ahmedabad—4 years—Diploma.

(2) Kalabhavan Technical Institute offers three years Diploma Course in Textile Chemistry including Dyeing, Bleaching, Printing and finishing.

Scope for Textile Technology Qualified Candidates.

The following is a list of suitable posts for Textile qualified persons; Checker in folding, Weaving Assistants, Weaving Masters, Winding Master, Textile Store Keeper, Carding Master, Comber Jobber, Spinning Master, Frame Line Jobber, Winding Master, Warping Jobber, Time-keeper, Fancy Jobber, Drawer, Sizing Jobber, Line leveler, Carding Master, Folding Master, Weaving tackler, Winding clerk, Pick Checker, Ring Line Jobber, Drawing-in-Jobber, Reeling Overseer, Bleaching Clerk, Costing Clerk, Over-hauling head, Head Fitter, Comber Tenter and Head Cut-looker.

13·3 Diploma in Textile Manufacture.

1. R. C. Technical Institute, Ahmedabad—4 years.
2. Bhavasinghjee Polytechnic Institute, Bhavanagar—4 years.

13·4 H. C. Cotton Spinning.

2 years—II form—Higher Certificate.

1. R. C. Technical Institute, Ahmedabad.
2. Bhavansinghjee Polytechnic Institute, Bhavanagar.

13·5 L. C. Cotton Spinning.

1 year—IV Class—Lower Certificate.

1. Textile Technical School, Parel, Bombay.
2. Bhavansinghjee Polytechnic Institute, Bhavanagar.

13·6 L. C. Cotton Weaving.

2 years—IV Class—Lower Certificate.

1. Textile Technical School, Parel, Bombay.
2. M. H. Saboo Siddik Technical Institute, Byculla, Bombay.
3. Govt. Power Weaving Instructional Institute, Sholapur.

13·7 Powerloom Weaving.

Literate—6 months.

1. Govt. Power Weaving Instructional Institute, Sholapur.

13·8 Handloom Weaving.

IV Class—2 years Certificate.

1. R. H. Paruck Industrial School, Andheri.
2. A. R. Somewalla Industrial School, Bordi, Thana.
3. K.E.S. Topiwalla Industrial School, Alibag.
4. Marine College and Seamen's Orphanage, Novha.
5. School of Industry, Satara.
6. Salvation Army Boys Industrial School, Ahmednagar.
7. King Edward VII Technical Institute, Dhulia.
8. Salvation Army boys' Industrial School, Kaira.
9. Venita Seva Samaj, Dharwar.
10. Govt. Industrial School, Amreli.
11. T. N. Technical School, Sawantawadi.
12. Govt. Power Weaving Instructional Institute, Sholapur.

Documentary Film: of Govt. of India 'Fibres to Fabrics' portrays the entire process of Cloth-making from the growing of cotton to the finished goods. The Documentary Film 'Warm and Fleecy' illustrates the Wollen Industry.

14. Film Technology and Photography.

(1) Film Technology Course connected with production of films is available at the Hindustan Film Ltd., P. B. 2072, Calcutta-1. There is a stipend for students undergoing this course which lasts two years.

(2) There is a Cinema-Operator's Course of 18 months duration at the Central Polytechnic, Madras. Cinema-Operators, Licence-holders are also appointed as Radio Mechanics in Class III Service.

(3) The Madras Amateur Photographic Society affiliated to the Royal Photographic Society as well as to the Photographic Society of America is a Professional Institution for Photography including Cinematography. Members are entitled to take part in International Exhibitions and Competitions in this line. The Society is at Y.M.I.A.

Buildings, 9, Armenian St., Madras. Photographers are employed in Press Information Bureau Govt. of India, as well as in advanced research institutions.

(4) The Madras Film Institute, Ghani Buildings, Pondy Bazar, T. Nagar, Madras has courses in photography and allied arts.

(5) At J. Occupational Institute, Bangalore there is a diploma course of three years on cinematography.

(6) Projectionist Course :—

St. Xavier's College Technical Institute, Cruickshank Road, Bombay, six months.

(7) There is a Diploma Course in Photography at Allahabad University.

(8) Bombay Govt. Certificate in Photography-one year Course at Gadbole's Photographic, Poona.

SCOPE

Good photographers are required in the establishments like the Press, Research Institutions, Audio-visual aid organisations, the Police, as Forest Photographer Silvi-culture branch, Forest Research Institute and other Research Institutes. Also qualification in Photography is an additional qualification for scientists: as Technical Officers, Films Division, Govt. of India.

Guide Book :—The Daily Mail, New Carmelita House, London, E.C. 4, has a useful publication "Professional Photographer" by M. Harker which is useful to read in this connection.

15. Silk Technology.

INTRODUCTION

Silk is an established Industry in India for fabrics. Career in this field is an interesting and paying one.

INSTITUTES

Govt. Silk Institute, Nathanagar P.O., Bhagalpur, has one year course in each of the three branches (a) Sericulture (b) Spinning, Bleaching, Dyeing and Printing of Silk yarn and fabrics (c) Silk Throwing, Warping and Weaving.

Admissions are in January.

SCOPE

Silk Technologists are required in factories at Mysore, Bengal, Ahmedabad and Kollegal.

Documentary Film of Govt. of India, 'Story of a Silkworm' can be seen in this connection.

16. Further course for Sanitary Inspectors.

Courses in Malariology for Malaria Inspectors lasting 4-weeks are held from time to time at the Malaria Institute of India. Normally candidates nominated by the various State Governments, Railways, Industrial concerns etc. who are qualified Sanitary Inspectors and are likely to be utilized for malaria control duties are admitted to the course. The courses are primarily meant for qualified Sanitary Inspectors engaged in public health duties under Governments or local bodies.

Normally a course for Malaria Inspectors is held in July/August each year. When it is decided to hold the next course, necessary information will be communicated to the Public Health authorities of the various State Governments, Railways etc. who will be asked to forward applications for admission.

No tuition fees are charged but the candidates have to make their own arrangements with regard to boarding, lodging and conveyance.

17. Occupational Therapy.

K. M. Hospital, Bombay has a training course in this subject for S. S. L. C. or Matriculates.

STAGE 1

CHAPTER—VII

COMMERCE

CONTENTS

1. Commerce.
2. Banking.
3. D. Com.
4. Indian Merchants Chamber.
5. Chamber of Commerce Examinations.
6. All-India Diploma in Commerce.
7. Institute of Secretaries.
8. Secretarial Practice.
9. Co-operation.
10. Sales Management.
11. Actuaries.
12. Insurance.
13. Costs and Works Accountancy.
14. Book-keeping.
15. Institution of Costs and Works Accountants.
16. The Association of Practising Accountants.
17. Institute of Taxation.

1. Commerce

INTRODUCTION

Commerce is a wide field in India and there are good chances for qualified young men with initiative to have a good career.

INSTITUTES

The following is a list of institutions :—

1. Central School of Commerce, Hyderabad—Diploma—2 years.
2. Sanatan College, Aleppey, Travancore—Diploma—4 years.
3. Central College, Bangalore—Degree—4 years.
4. Rajendra College, Chapra, Bihar,—Diploma—2 years.
5. Sambalpur College, Sambalpur, Orissa—Diploma—2 years.
6. Govt. Commercial Institute, Calcutta—Diploma—2 years.
7. B. M. College of Commerce, Poona--Degree—4 years.
8. H. D. L. College of Commerce, Ahmedabad—Degree—4 years.
9. P. S. S. Memorial College, Chandansi, U.P.—Diploma—4 years.
10. Delhi Polytechnic—Diploma—3 years.
11. Mysore University—Diploma—3½ years.

2. Banking

INSTITUTES

The Indian Institute of Bankers hold examinations for matriculated bank employees. There is also a one year part time course at Delhi Polytechnic preparing students for part I of the Banking examinations. Titles granted on successful completion of the two parts are Cert. A. I. I. B. Address :—Indian Institute of Bankers, Imperial Bank of India Building, Apollo Street, Fort, Bombay.

Note :—Read 'Banking as Career'—Rotary Club publication.

3. D. Com.

INSTITUTES

The D. Com. Exams. of the Indian Merchant's Chamber, Bombay are recognised by the business community as a standard examination. There are five different groups :— Accountancy, Banking, Secretarial, Insurance and Business Organisation. Candidates must appear through institutes recognised by Indian Merchants' Chamber. Those securing D. Com., can become Income-tax Practioners.

Note :—This qualification is a recognised one for school assistants to teahc commercial subjects under bifurcated S.S.L.C. system.

4. *The Indian Merchants Chamber*, Bombay holds its exams. in May at various centres throughout the country. There are specialised courses in accountancy, Business Organisation, Secretarial and Banking diploma groups among others. Five subjects are prescribed for a group. A candidate who passes the group is entitled to the Diploma D. Com (I. M. C.). This qualification is useful in securing appointments in commercial and business offices.

The Chamber also issues senior and junior certificates in (1) Theory and Practice of Commerce (2) Commercial Correspondence (3) Book-keeping (4) Shorthand (5) Typewriting. Full particulars and a list of approved institutions could be had from the Secretary of the Chamber at Indian Merchants Chamber Building, Back Bay Reclamation, Fort, Bombay.

5. **Chamber of Commerce Examinations.**

The London Chamber of Commerce, 69, Cannon St., London, hold a number of useful examinations which could be taken in India in either (1) single subjects (2) group subjects. There are three grades (a) Elementary stage (b) Certificate stage and (c) Higher stage. These qualifications are obtainable in all branches of commerce and are useful qualifications for careers in Industries and Commerce.

The Indian centres are :

MADRAS : Y.M.C.A. Esplanade, Madras.
Y.M.C.A. Calicut.
Y.M.C.A. Coimbatore.
Y.M.C.A. Madura.
Commercial High School, Narsapur.
The Lawrence School, Lovedale, Nilgris.
Tinnevelly Commercial Association, Palamcottah.
Tuticorin Chamber of Commerce, Tuticorin.

BOMBAY : Elphinstone Technical High School, Cruickshank Road, Bombay.

BANGALORE : Inspector of Schools, Coorg and Bangalore, Mayo Hall, Bangalore.

BENGAL : Y.M.C.A., 86, College St., Calcutta.

COCHIN : Government Commercial Institution, Ernakulam.

TRAVANCORE : S.L.B. English High School, Nagercoil.
Government School of Commerce, Quilon.
Office of Director of Industries, Trivandrum.

PUNJAB : Y.M.C.A., The Mall, Lahore.

U. P. : Education Department, Rampur State.
Gann's Shorthand Institute, Aligarh.

PATIALA : Education Office, Patiala.

Note :—The Candidate with Commerce qualification may take up careers in the field of advertising. For this he will find the following institute useful. The Advertising Association, Ludgate House, 110-11, Fleet St., London E. C. 4.

The Pudupet Convent School of Commerce, Marshall's Road, Egmore, Madras, coaches students for L.C.C. examinations mentioned above.

6. All India Diploma in Commerce

The All India diploma course in Commerce and Business Administration of the Delhi Polytechnic is a full time 3 years course. Every student must do 12 months practical work in an approved office or a firm after passing the final examination in order to get his National Diploma in Commerce. This qualification is recognised by the Govt. as equivalent to B. Com. of the Indian Universities. There is also a three years certificate course which is part time at this Institute, which can be taken by people employed in Commerce.

(a) Candidates who have passed the All India Diploma in commerce examination with auditing as a special subject are exempted from passing the first chartered accountants examination.

(b) Holders of All India Diploma in Commerce with Advanced Accountancy and Auditing are permitted to practice as Incometax Practioners.

A candidate who has obtained All India Certificate in Commerce may qualify himself for higher certificate in commerce by passing in any one of the elective subjects of the All India Diploma in Commerce. For this he must put in at least one years' part time attendance at an affiliated Institute.

The following are Institutions affiliated to the All India Council for Technical Education for running All India Courses in Commerce.

1. Delhi Polytechnic, Delhi.
2. City College, 13, Mirzapur St., Calcutta.
3. Govt. Commercial Institute, 210, Bowbazar St., Calcutta.
4. Y.M.C.A. College of Commerce, Esplanade, Madras.
5. Champion Metropolitan College of Commerce, Mysore.
6. Sanatana Dharma College, Santanapurm, Alleppey.

7. The Institute of Secretaries.

INTRODUCTION

The Profession of Secretary opens to the ambitious man or woman a vast field of service where efficiency, energy and enterprise secure a remunerative reward.

The Secretary, as the principal officer of the Company or Public Body, is responsible for the proper management of its affairs. It has been said that "there is plenty of room at the top" and this is certainly true in the Secretarial Profession. A well-trained man with administrative ability will find here a wide scope for his energies. Other positions are Company Secretary, Secretary organiser, Private Secretary.

INSTITUTES

7-1. The Institute of Secretaries at 16, George St., Mansion House, London, E.C. 4. is a Professional Institute for promotion of the interests of the Secretaries in Joint Stock Company and other Public Bodies. Indian students could register as overseas members of the Institute. The passing of the preliminary, intermediate and final examinations enables them to become full members of this Institute as Chartered Secretary. The designing intials applicable are E.C.I.S. and F.C.I.S. Candidates must be over sixteen years of age when taking their preliminary examination. There are Institutions like Y.M.C.A. College of Commerce, Madras. The B.I.E.T. Bombay and Darwar College of Commerce Bombay which coach students for these examinations.

7-2. The International Corporation of Secretaries, Australia, also hold their examinations in India for memberships. The address of the Institute is 10, O'Cannell St., Sydney. Designation on passing the examination are :—F.I.C.S., A.I.C.S., L.I.C.S.

Examination centres in India :—

Alexandra College of Commerce, Bombay.

Vasai College of Commerce, Madras.

Vedakan's College of Commerce, Madras.

Burma College of Commerce, Hyderabad.

7-3. The Indian Merchants Chamber also has an examination for Diploma in Specialised Company Secretarial.

8. Secretarial Practice

8-1. There is a two years Diploma Courses in Secretarial Practice at Gauhati University for which matriculates are eligible. The subjects are :—English, Economics, Secretarial Practice and Procedure, General Commercial Knowledge, Book-Keeping, Business methods, and Shorthand and Typewriting.

8-2. Secretarial Practice can be offered as a single subject certificate Examination of the London Chamber of Commerce.

8-3. There is one year full time day course at Delhi Polytechnic for girls on this subject preparing for employment in Government, and Mercantile Offices as Secretaries, and Personal Assistants.

9. Co-operation—Courses.

The Madras State Co-operative Union at 379, Netaji Subhas Chandra Bose Road, G. T. Madras conducts the examinations in co-operation. The following Institutes offer eleven months courses :—

1. Ramadas Co-operative Training Institute, Rajahmundry.
2. The Rayalaseema Co-operative Training Institute, Anantapur.
3. The Hood Co-operative Training Institute, Tanjore.
4. The Coimbatore Co-operative Training Institute, Coimbatore.

SCOPE

The Co-operative trained young people are eligible for appointments as supervisors and clerks in the District Co-operative Central Banks. They are also eligible for managerial or clerical services in other types of Societies such as Co-operative Stores, Weavers Societies, Land Mortgage Banks. They may also make a career as Co-operative Inspectors in Provincial Governments.

10. Sales Management.

The Incorporated Sales Managers Association at 23, Bedford Square, London,W.C. 1. holds two examinations leading to graduateship or associateship (G.S.M.A. or A.S.M.A.) of the Institute. These examinations could be taken in India.

11. Actuaries.

The profession of actaries in one of the attractive ones which does not need a large capital expenditure at the outset. There are four examinations to pass but while these examinations are taken the candidate can in most cases, work in an Insurance Company and

earn his way. The candidate must have a good aptitude for mathematics. All examinations leading to membership of their Institute of Acturies could be taken in India. The first examination for the candidate is the entrance examination comprising General English and Algebra, and Calculus. The Institute of Acturies is at Staple Inn Hall, Holborn, London. There is also a tuition service by correspondence the details of which can be had from the Secretary of the Institute.

SCOPE

Insurance Companies; Acturial Assistants in the Department of Insurance Govt. of India; Acturial Research Officers in Govt. of India, Ministry of Labour.

Note :—For advicing students in connection with the acturial tuition service the Overseas representative in India is as follows.

India. Bombay: L. S. Vaidyanathan, M. A., F. I. A., Oriental Government Security Life Assurance Co., Ltd., Post Box 148.

Honorary Supervisors for Examinations at Indian centres.

Bombay—The Principal, Sedanham College of Commerce and Economics. (2) Calcutta—The Controller for Examinations, University of Calcutta. (3) Madras—The Commissioner for Govt. Examinations, Nungambakkam. (4) Delhi—Registrar, University of Delhi. (5) Simla—Superintendent of Insurance, Commerce Department, Kanady House.

12. **Insurance**

12-1. After matriculation the student may enter the service of an insurance company and obtain training in this field. Together with this training, he may prepare for exams. of the Chartered Insurance Institute, 20 Aldermanbury, London. E. C. 2. The Corporation of Insurance Brokers, 3 St., Helen's Place, London, E.C. 3 or the Association of Average Adjusters, 70 Old Broad St., London, E. C. 2. These professional qualifications are useful in this career.

12-2. Candidates can also appear for the London Chamber of Commerce Examination on Banking and Insurance at local centres in India.

12-3. The Indian Life Assurance Offices Association has exams. for junior workers the passing of which affords the "Field worker's certificate." The higher exam. in this field is the "Diploma in Insu-

rance." There is also the Part II examination which leads to "Senior Certificate in Life Assurance." The Part III examination leads to Diploma in Life Assurance. Address: Industrial Assurance Building, Churchgate, Bombay.

12-4. The Indian Merchants Chamber, Back Bay Reclamation, Fort, Bombay, holds an examination leading to a Diploma in Insurance in any of the following branches: Life, Fire, Accident or Marine.

Note :—(1) For a list of Insurance companies the candidate may refer to the Madras Commercial Directory 1952. An useful book for those planning to enter this career is the booklet on Insurance published by the National Planning Committee, India.

(2) An useful magazine for guidance regarding this profession and its scope is the 'Insurance Review,' 46, Daryaganj, Delhi.

(3) Positions in this career include field workers, junior employees, senior assistants, assistants in the acturial offices, agency managers, district managers, inspectors, superintendents, managers and regional inspectors; investigation officers.

Documentary Film of Government of India "Dawn of Social Security" illustrates the field of Insurance.

13. Cost and Works Accountancy.

1. Cost Accountancy is a specialised branch of Accountancy mainly concerned with methods to secure maximum production efficiency by a strict control over expenditure.

2. The Indian Institute of Cost and Works Accountants, 6, Hastings Street, Calcutta, holds examinations for membership of this professional institute. Matriculates are exempt from the preliminary examinations. Candidates should pass the intermediate and final examinations (both consisting of two parts) before becoming full members of the institute. Candidates must have completed 21 years for associateship.

(a) Preliminary Exam.—English, Mathematics, Language.

(b) Intermediate Exam.—Practical matters, Book-keeping and Accountancy, Economics, Factory organisation.

(c) Final Exam.—Advanced Accountancy, Statistics, Industrial Law, Office organisation, Factory organisation, Costing.

The examinations are held normally in January and July at Madras, Delhi, Bombay and Calcutta.

3. The scope for the cost accountant is increasingly widening as it is the main job of the cost accountant to estimate and economise costs in industries and offices. Combining with his industrial knowledge and costing knowledge he is qualified for many administrative posts in the various industries. There is also the scope of the private Cost consultant if the qualified men wish to practice on their own. The Railways also take Cost Accountants; also as Cost Accountants in Ministry of Finance.

4. The London Institute of Costs and Works Accountant is at 63, Portland Place, London, W. 1.

The George Telegraph Training Institute, 136, Bowbazar St., Calcutta-12, has a two year course for coaching of the C. A. Examinations. Cost Accountants: note that Costing and Prices Departments of Governments, Factories employ qualified people as Asst. Costs Account Officers in organisations like Central Tractor Organisation and the Ministry of Finance.

14. Book-keeping.

The Institute of Book-keepers, 3, St., Helen's Place, Bishop's Gate, London, E. C. 3 is a professional institution of Book-keepers and membership of the institute is valuable to all persons irrespective of age. Certificates are issued in respect of each subject in which the candidate passes and the various stages of the examination need not be taken consecutively. Associates and Fellows are known as "Certified Book keepers" and are entitled to write after their names the letters A. B. I. and Fell. B. I. The qualification is a useful one in accountancy and secretarial professions.

The following are the recognised examinations in book-keeping with their equivalence of recognition.

1. Examination in Book-keeping stage II (Associate) held by the Institute of Book-keepers, London.	Govt. Technical Exam. in Book-keeping — Lower grade.
2. Junior Grade Exam. in Book-keeping held by the London Chamber of Commerce.	do.

3. Examination in Book-keeping by stage III (fellowship) held by the Institute of Book-keepers, London.	Govt. Tech. Exam. in Book-keeping Higher Grade.

15. Institute of Costs and Works Accountants

At 63, Portland Place, London, W. I. holds the following examinations :—

1. Preliminary:—This is the first examination and is held in June and December every year. Candidates must be above 16 years of age. After passing this examination candidates become registered students of the Institute.

2. Intermediate Examination :—Candidates who have passed the preliminary examination or who have been exempted from it could take this examination in two parts or in single appearance.

3. Final Examination :—Only those who have passed inter. and are registered students of the Institute could take this final examination. The Indian centres for these examination are Delhi, Madras, Calcutta and Bombay. Further particulars and forms of application could be obtained from the Secretary of the Institute at London.

Note :—The Journal 'The Chartered Students' Telephone' published by Lynch and Co., London, E.C. 2 is an useful guidance to the student. Read also "Chartered Accountancy as a Career" by Wilson in the Indian Institute of Accountancy Journal, Vol. 3, Number 11.

16. The Association of Practising Accountants.

13. O'Connel Street, Sydney, Australia is an useful body for membership. There are three classes of membership viz. Fellows, Associates and Licentiates. There are Preliminary, Intermediate and final examinations which can be taken from India. This is advantageous to such of the candidates who have been assistant accountants or clerk to a public accountant for at least three years.

Examination Centres in India.

Alexandra College of Commerce, Bombay.
Vasai College of Commerce, Madras.
Vedakans College of Commerce, Madras.
Burma College of Commerce, Hyderabad.

17. Institute of Taxation.

For persons engaged in careers in tax offices and allied branches it is useful to obtain the associate membership of the Institute of Taxation, Cliffords Inn, Fleet St., London, E. C. 4. The Institute's examination is open without restriction to anyone over 19 years of age and is particularly suitable for those who desire to specialise in Taxation.

Documentary Films :—Young people intending to enter commerce as career may usefully see the Government of India Films 'Frankly Speaking.'

STAGE I

CHAPTER—VIII

MISCELLANEOUS

CONTENTS

1. Teaching.
2. List of Secondary Training Schools.
3. Music.
4. Librarianship.
5. Journalism.
6. Dairy Training.
7. Indian Medicine.
8. Dentistry.
9. Veterinary.
10. Homeopathy.
11. Siddha.
12. Gandhi Grama.
13. Nutrition and Catering.
14. Pharmacy.
15. Sanitary Inspector.
16. Forestry.
17. Radiology.
18. Computers Training Course.
19. Local Self-Government Training.
20. Private Appearance to Intermediate (Ajmer).
21. Laboratory Technic.
22. Archives Keeping.
23. Useful Associations.

1. Teaching.

Teaching offers a good career for the S.S.L.C. passed candidate. The following are the courses :—

1. Two years course leading to a diploma in Government Training Schools.

2. The Pracharak diploma in Hindi issued by the Pracharak Sabha.

3. Manual Training Certificate Course at Teachers' College, Saidapet.

4. Art Masters Certificate Course, Teachers' College, Saidapet.

5. Adult School Teachers Course at Government Training Schools, for Adult School Teachers, Udayagiri, Nellore District.

6. Physical Education Teachers' course at Y.M.C.A. College of Physical Education.

7. Teachers Certificate of Nursery, Montessori and Kindergarden Training Schools at :—

(a) Nursery School, Vepery.

(b) Childrens' Garden School, Mylapore, Madras.

(c) Arundale Montessori Training Centre, Adyar, Madras.

8. For Technical Teachers' Training, there is a one year course at the Central Polytechnic, Madras which prepares the students for the diploma enabling them to teach in technical schools. Eligibility—the appropriate diploma issued by T.D.E. Board, Madras.

9. There is an Art Teachers Training course at the Jamia Millia Islamia Teachers Training Institute at Jamianagar, Delhi. The course lasts nine months.

10. An useful institution in this connection of Teacher Training in Art is the Austosh Mukerjee Museum of Art, Calcutta which contains useful collection of Indian paintings and artistic work. One can obtain training at this institute.

11. The Moinuddin Art Gallery, Aligarh, is another institution useful in this connection.

12. Bombay University has a one year course leading to diploma in teaching.

13. *Physical Education* :—Andhra Training College of Physical Education, Vijayawada has a one year course leading to lower grade examination certificate of the Government.

14. The Lady Teachers Diploma in Tailoring or Embroidery and Fancy work–one year course at :—

Gujarathi Hindu Mandal Street, Bombay.
Industrial Art School, Bombay.
Pathare Prabhu Mahila Samaj, Bombay.
Navbharat Audyogik Vidyalaya, Bombay.

Note :—Apart from regular schools, the Railway Service Commission recruits School Masters for Railway Schools. Apply Railway Service Commission when advertisements occur.

2. List of Ordinary Training Schools for Men.

Name of District.	Serial No.	Name of the Training School.
Visakhapatnam North.	1.	Government Training School, Chicacole.
	2.	Government Training School, Parvatipur.
Visakhapatnam South.	3.	Government Training School, Bheemunipatnam.
East Godavari.	4.	Government Training School, Amalapuram.
	5.	B.C.B.M. Rakshnaodaya Training School, Kakinada.
	6.	U.L.C.M. Training School, Rajahmundry.
Krishna East.	7.	Government Training School, Masulipatnam.
	8.	Noble Training School, Masulipatnam.
Krishna West.	9.	C.M.S. Training School, Vidyanagar.
	10.	R.C. Training School, Gundala.
Guntur North.	11.	Government Training School, Guntur.
	12.	St. Ignatius Secondary Training School, Phiranghipuram.
Guntur South.	13.	Government Training School, Ongole.
	14.	A.B.M. Training School, Bapatla.
	15.	U.L.C.M. Training School, Narasaraopet.
Kurnool.	16.	Government Training School, Kurnool.
	17.	S.P.G. Training School, Nandyal.
	18.	A.B.M. Training School, Cumbum.
Bellary.	19.	Government Training School, Hospet.
Anantapur.	20.	Government Training School, Anantapur.
Cuddappah.	21.	U.M. Training School, Cuddappah.
Nellore.	22.	Government Training School, Kanigiri.
	23.	Government Training School, Nellore.

Name of District.	Serial No.	Name of the Training School
Nellore.	24.	St.Joseph's Training School,Nayudupet,Nellore.
Chittoor.	25.	Government Training School, Chittoor.
Madras.	26.	Government Training School, Egmore, Madras.
	27.	do for Muslims, Mount Road.
	28.	Secondary Training Section attached to the Madrasa-I-Azam.
Chingleput.	29.	Government Training School, Chingleput,
South Arcot.	30.	do Villupuram.
	31.	R.C. Training School, Dindivanam.
Tanjore East.	32.	C.S.M. Training School, Tranquebar.
Tanjore West.	33.	Government Training School, Tanjore.
Mathurai.	34.	Government Training School, Dindigul.
	35.	A.M. Training School, Pasumalai.
Ramnad.	36.	St. Stanislaw's Training School, Sathur.
Tirunelveli West.	37.	Government Training School, Tirunelveli.
	38.	Bishop Sargeant Training School, Palayamcottai
North Arcot.	39.	Union Mission Training School, Virudhampet.
	40.	Concordia Training School, Ambur.
Salem.	41.	Government Training School, Mettur.
Tiruchirapalli.	42.	Government Training School, Tiruchirapalli.
	43.	New Tranquebar Training School, Irungulur.
	44.	R.C. Training School, Tiruchirapalli.
Coimbatore & Nilgiris.	45.	Government Training School, Coimbatore.
	46.	Government Training School, Ootacamund.
	47.	L.M. Training School, Erode.
	48.	M.M. Training School, Dharapuram.
Malabar North.	49.	Government Training School, Cannanore.
	50.	B.E.M. Training School, Tellicherry.
Malabar South.	51.	Raja's Training School, Kollengode.
	52.	St. Joseph's Training School, Pavarathy.
	53.	C.A. Training School, Ayakkad.
Central Malabar.	54.	Government Training School, Malappuram.
	55.	Government Training School, Kozhikode.
South Kanara.	56.	Government Training Shool, Udipi.
	57.	Government Training School, Mangalore (Secondary Grade).

List of Ordinary Training Schools for Women

Name of District.	Serial No.	Name of the Training School
North Visakhapatnam.	1.	Queen Mary's Government Secondary & Training School for Women, Visakhapatnam.
East Godavari.	2.	Government Secondary & Training School for Women, Rajahmundry.

Name of District.	Serial No.	Name of the Training School
East Godavari.	3.	C.B.M. Jubilee Training School, Kakinada.
	4.	Schade Training School, Rajahmundry.
West Godavari.	5.	Government Secondary & Training School, Ellore.
	6.	do do Narasapur.
Krishna East.	7.	do do Masulipatnam.
	8.	C.M.S. Sharkey Memorial Training School, Masulipatnam.
Krishna West.	9.	St. Antony's Training School, Vijayawada.
	10.	Bishop Azariah Training School, Vijayawada.
North Guntur.	11.	Government Secondary & Training School, Guntur, (Muslim).
	12.	U.L.C.M. Stall Training School, Guntur.
	13.	St. Joseph's Training School, Guntur.
	14.	P. Mangammara Training School, Nidubrolu.
	15.	St. Ann's Training School, Phirangipuram.
South Guntur.	16.	M.C.M. Training School, Ongole.
Kurnool.	17.	Government Secondary & Training School for Muslim Women, Kurnool.
	18.	S.P.G. Holy Cross Training School, Nandyal.
	19.	St. Joseph's Training School, Kurnool.
Anantapur.	20.	Government Secondary & Training School for Women, Anantapur.
Cuddappah.	21.	Government Secondary & Training School for Women, Cuddappah.
Nellore.	22.	Government Secondary & Training School for Women, Nellore.
	23.	A.B.M. Training School, Nellore.
Chittoor.	24.	Government Secondary & Training School for Women, Madanapalli.
	25.	B.M. Training School, Chittoor.
Madras.	26.	Sarada Vidyalaya Training School, Madras 17.
	27.	St. Joseph's Higher Elementary Training School, San Thome.
	28.	St. Christophers' Training School, Madras.
Chingleput.	29.	Government Secondary & Training School for Women, Kancheepuram.
	30.	Gnanodaya Training School, St. Thomas Mount.
Tanjore East.	31.	St. Theresa's Training School, Tranquebar.
Mathurai.	32.	Government Training School for Women, Dindigul.
	33.	Capron Hall Training School, Mathurai.
	34.	D.M. & R. Training School, Tirumangalam.
	35.	St.Theresa's Training School, Old Kesavanpalayam, Mathurai.
	36.	St. Michael's Higher Elementary Training School, Palni.
	37.	Our Lady of Dolous Training School, Dindigul.

Name of District	Serial No.	Name of the Training School
Ramnad.	38.	Sacred Heart Training School, Srivilliputtur.
Tirunelveli East.	39.	St. John's Training School, Nazareth.
	40.	Ooliyasthanam Higher Elementary Training School, Palayapettai.
Tirunelveli West.	41.	Government Training School for Women, Palayamkottai.
	42.	Sarah Tucker Training School, Palayamkottai.
	43.	P.S.S. Nadar Training School, Tuticorin.
	44.	Valliammaiyar H. E. Training School, Kulasekarapatnam.
	45.	St. Ann's Training School, Adaikalapuram.
North Arcot.	46.	Government Secondary & Training School for Women, Gudiyattam.
	47.	do Vellore.
	48.	R.C. Training School, Vellore.
	49.	Mary Immaculate Training School, Tirupattur.
	50.	Government Secondary & Training School for Women, Namakkal.
	51.	L.M. Training School, Salem.
	52.	St. Mary's Training School, Arisipalayam.
Tiruchirapalli.	53.	Government Secondary & Training School for Women, Karur.
	54.	V. Goschen Government Secondary Sect. Training School for Muslim, Tiruchirapalli.
	55.	St. Angela's Training School, Tiruchirapalli.
	56.	All Saint's S.P.G. Training School, Puttur, Triuchirapalli.
	57.	Holy Cross Training School, Tiruchirapalli.
Coimbatore & Nilgiris.	58.	Government Secondary & Training School for Women, Erode.
	59.	Government Secondary & Training School for Women, Coimbatore.
	60.	M.M. Training School, Dharapuram.
	61.	Bethlehem Training School, Ootacamund.
Malabar North.	62.	Government Secondary & Training School for Women, Cannanore.
Malabar South.	63.	do Tirur.
	64.	L.S.M. Convent Training School, Ottapallem.
	65.	Training School for Women, Kodavayoor.
	66.	Christ King Convent Training School, Pavarathy.
Central Malabar.	67.	Government Secondary & Training School for Women, Kozhikode.
	68.	St. Vincent's Training School, Kozhikode.
South Kanara.	69.	Government Secondary & Training School for Women, Mangalore.
	70.	do do Udipi.
	71.	St. Ann's Training School, Mangalore.
	72.	Capitano Training School, Kankanady.
	73.	Rosa Mistica Training School, Kinnikambala.

2-1. List of Basic Training Schools for Men

Name of District	Serial No.	Name of the Training School
North Visakhapatnam.	1.	Government Basic Training School, Visakhapatnam.
	2.	Aided Basic Training School, Vontithadi.
Godavari East.	3.	Government Basic Training School, Rajahmundry.
Godavari West.	4.	Government Basic Training School, Pentapadu.
	5.	do Eluru.
	6.	do Gopannopalem.
Guntur South.	7.	Government Basic Training School, Vinashramam.
	8.	do Mynampadu.
Bellary.	9.	do Bellary.
Anantapur.	10.	do Hindupur.
Cuddappah.	11.	do Rayachoti.
Nellore.	12.	do Pallepadu.
Chingleput.	13.	do Tirur.
South Arcot.	14.	do Cuddalore.
	15.	Aided Basic Training School, Keelamoongiladi.
Tanjore East.	16.	Government Basic Training School, Nagapattinam.
	17.	do Vedaraniyam.
	18.	Aided Basic Training School, Tiruchitrambalam.
Mathurai.	19.	Government Basic Training School, Kallupatti.
Ramnad.	20.	Government Basic Training School, Malliputhur.
	21.	do Ramnad.
	22.	do Palayampatti.
	23.	do Jogilpatti.
Tirunelveli East.	24.	Government Basic Training School, Koilpatty.
Tirunelveli West.	25.	do Kuruvikulam.
North Arcot.	26.	do Ranipet.
	27.	do Arcot.
Salem.	28.	do Gangaivalle.
Coimbatore & Nilgiris.	29.	do Avinashi.
	30.	Aided Basic Training School, Perinaickenpalem.
Malabar North.	31.	Government Basic Training School, Palyad.
	32.	Government Basic Training School, Badagara.
South Malabar.	33.	do Palghat.
	34.	Aided Basic Training School, Kalapatti.
South Kanara.	35.	Government Basic Training School, Maipady.
	36.	do Mangalore.
	37.	Aided Basic Training School, Ujre.

2-2. List of Basic Training Schools for Women

Name of District	Serial No.	Name of the Training School
Krishna West.	1.	Aided Basic Training School, Tiruvuru.
Bellary.	2.	Government Basic Training School, Bellary.
Madras.	3.	Government Basic Training School section attached to the Lady Wellingdon Training College, Madras.
Chingleput.	4.	Government Basic Training School, Kancheepuram.
South Arcot.	5.	do Cuddalore.
	6.	Sacred Heart Basic Training School, Pudupalayam.
	7.	Aided Basic Training School, Portonovo.
Tanjore West.	8.	Government Basic Training School, Tanjore.
Mathurai.	9.	Aided Basic Training School, Chinnalopati.
Ramnad.	10.	Government Basic Training School, Ramnad.
South Malabar.	11.	do Palghat.

	MEN	WOMEN	TOTAL
Government Training Schools	30	26	56
Aided Training Schools	27	47	74
Government Basic Training Schools	31	7	38
Aided Basic Training Schools	6	4	10
	94	84	178

3. Music

INTRODUCTION

Music both vocal and instrumental offers good careers for young people who have the talent. Regular courses in this subject are available at :

INSTITUTES

1. The Diploma course—Two years—Madras University.
2. The Sangita Bushana of Annamalai University—4 years.
3. Diploma course—Allahabad—two years.
4. The Sangitha madyama—Banaras University—two years.
5. Indian students who have an aptitude for western classical music could also appear for the junior and senior certificate exams. of the Trinity College of Music, London by taking their external exams. in Ceylon. Candidates are also prepared privately for these exams. by artists and teachers. Such of

those who are interested may contact Musee—Musical, Mount Road, Madras-2. They can appear for the various grades of examinations conducted by the Trinity College of Music. (The centre at Madras is at the White Memorial Hall.)

6. The Central College of Carnatic Music, Adyar, has a two years course in vocal and instrumental music. There is a preparatory course for Vidwan Title.

7. There is a Sangitha Siromani course of four years duration at Kalakshetra, Adyar. (For matriculates with music as optionals).

8. In Trivandram there is the Swathi Thirunal Academy of Music with four years course leading to Gayaka title.

9. Andhra University has a two years diploma in Indian Music at the Maharaja's Music College, Vizianagaram.

10. The Marris College of Hindustani Music, Lucknow, offers a long and intensive course of seven years in Hindustani music—vocal and instrumental.

11. The Gandarva Maha Vidyalaya, Bombay provides Hindustani Music course—vocal and instrumental.

12. Viswabharathi University, Shantiniketan has a music course for vocal and instruments.

13. The A. E. G. Centre and School M. P. also takes instructors for Military Music.

14. Allahabad University has a two year's course for diploma in Indian Music.

SCOPE

Scope lies in professional performances, employment in Government or private schools as music teachers, radio performances and orchestral concerts in studios, and private tuitions.

Useful institute in this connection is the British Council Regional Branches who have musical evenings in classical music.

Documentary Films in this connection for information are 'Melody of Hindustan', and 'Musical Instruments of India'. For Dances the following documentaries contain useful information 'Dances of India' and the 'Kathak Dance.'

4. Librarianship

1. A three months certificate course in librarianship is offered by the Madras University for S.S.L.C. passed students who have subsequently been librarians for a period of five years. The course includes theoretical and practical training at the University Library' Madras.

2. For the benefit of those employed in libraries to acquire the technical knowledge required the Govt. of India Education Ministry has a one year training course in librarianship at the end of which a certificate by the Govt. is issued to successful candidates.

3. There is one year diploma course in librarianship at Andhra University.

4. There is two years diploma course in librarianship at Bombay University.

5. Journalism

There is a one year certificate course in journalism at Hislop College, Nagpur open for matriculates.

6. Dairy training courses given at the Indian Dairy Research Institute, Bangalore.

The Indian Dairy Diploma Course—It is of two years duration and gives comprehensive training and theory course on the subject. This is essentially a training for management of a Dairy farm. About 24 students are admitted.

SCOPE

As dairy assistants in co-operative subordinate service.

7. Indian Medicine

There is a diploma course leading to a licenciate in Indigenous Medicine at the College of Indian Medicine, Kilpauk, Madras. The matriculates are eligible for this course. Preference would be given to those who have offered optionals in one of the following: Chemistry, Botany, Physiology and Physics. Besides this candidates should have proficiency in English and (1) Sanskrit or Telugu for Ayurveda (2) Tamil for Siddha and (3) Urdu for Unnani. Candidates must be above 16 years of age. The duration of the course is four

years. The successful completion of this course leads to designation letter L. I. M. Passed candidates can take the A. I. M. (Associate of Indigenous Medicine) course of two years duration in which anyone of the three branches can be offered as main and the other as subsidiary. After three years of practice after passing L. I. M., candidates can appear for the H. P. I. M. (High Proficiency in Indigenous Medicine) test. Graduates in Indian Medicine can become rural medical practioners with allowances from District Boards. (The above course is suspended at present.)

2. There is a six year course in Ayurveda at the Banaras University.

3. The Govt. Ayurvedic and Unnani College, Mysore, has a four years and nine months course leading to L. A. M. S. and L. U. M. S. respectively.

8. Dentistry

Four year courses for diploma in Dental Science are available at the Nair Hospital Dental Colleges, Bombay and the Calcutta Dental College and Hospital, Calcutta.

9. Veterinary

There is a diploma course for livestock and veterinary inspectors qualification at the Madras Veterinary College. Two years leading to Govt. Certificate.

10. Homeopathy

4 years course at Grace Medical Mission, Mavelikara P. O. Travancore-Cochin State. Also at Indian Institute of Homeopaths Homeo House, Kumbakonam and at Old Indian Medical College, Barnala (Patiala).

11. Siddha

Instruction in Tamil at Siddha Vaidya Kalluri, Darsarpuram, Thinanur.

12. Gandhi Grama

2 years training course in rural work at Worker's Home, Chinalapati Post (Madura Dist.)—constructive work in villages.

13. Nutrition and Catering.

The All India Womens' Food Council conducts a three months course in nutrition and catering to supply skilled and trained workers in this field. The course is at present conducted at Annapurna Cafeteria, Bombay.

13·1 The London School of Dietetics, at 21, Ridgmount Street, W. C. 1, has a correspondence course on this subject leading to their diploma.

14. Pharmacy.

1. Rajaputana University—Degree—5 years after Matriculation.
2. Diploma in Pharmacy—Madras Medical College—2½ years.

Diploma holders are employed as store keepers in King Institute and other Allied Institutes. Professional Institute: The Pharmaceutical Society of Great Britain, 17, Bloomsbury Sq., London, W. C. 1.

15. Sanitary Inspector.

A certificate course of one year duration for training as Sanitary Inspectors is available at Madras Medical College. S.S.L.C. is minimum qualification but the D. P. H. is empowered to exempt deserving cases of workers in health departments.

SCOPE

Service with Government and Municipalities.

16. Forestry.

Those Matriculates who wish to enter a career such as Forest Ranger or Forest Guards may take courses offered at:

1. Forest School, Balagat, Madya Pradesh.
2. Forest College, Coimbatore.
3. Forest College, Dehra Dun.

Generally the student would be asked to sign a contract with the State Government that he would serve at least for three years. Successful candidates will be employed in the State Subordinate Forest Service.

Empire Forestry Association, C/o. The Royal Empire Society, Northumberland Avenue, London, W. C. 2.

17. Radiology.

One year diploma course at Barnard Institute of Radiology, Madras General Hospital.

There is also a course for Certified Radiological Assistants at Madras Medical College.

18. The Computer's Training Course.

There is a six months computer's course at the Indian Statistical Institute, Presidency College, Calcutta. There is a Laboratory of Calculating Machines and Accessories at this Institute.

19. Local Self-Government—Training.

Those who have passed S.S.L.C. and who wish to enter Local Self-Government service may usefully undergo the training classes conducted by the Institute of Local Self-Government service at 11, Elphinstone Circle, Fort, Bombay, Diploma is issued on successful completion of a six months course.

20. Private Appearance Intermediate.

Candidates who have passed S.S.L.C. or Matric. may be allowed to take the Intermediate exam. of the Board of High School and Intermediate education of Ajmer privately without putting in attendance to a course. For applications they must address the board at Ajmer. For prospectus they may apply to Messrs. Youngman and Co., Purani Mandi, Ajmer.

21. Laboratory Technic.

There is a six months certificate course in laboratory technic at the All India Institute of Hygiene and Public Health, Calcutta. In addition to Matriculation Candidates must have some laboratory experience.

22. Archives Training.

There is a 3 months training course in Archives Keeping at the Government of India Archives Department, New Delhi.

23. Useful Associations.

23·1 Mountaineering:—The sport of Mountaineering, Rock Climbing, Ski Mountaineering and all out-door activities among the Indian Youths are a national asset. The association in this connection is the Indian Mountaineering Association, Dhalli, Simla, and a camp office is at Rama Building, Ambala Cantt.

23·2 The Bureau of Psychology, (U. P., Allahabad) is an useful Institution for parents of boys to refer to (if they so wish) for a psychological checking up for suitability for various vocations. This bureau also handles problems of difficult children.

23·3 The Madras Aquarists Society, (2, Prakash Mudaliar St., T. Nagar), is an useful society for such students who wish to take home aquarium as hobby.

23·4 The Youth Hostels Association, Indian centre at 2,796, Chamundipuram, Mysore City. Members enjoy the advantages, of the Youth Hostels Association of the world.

23·5 Guild of Service, 'Philroy,' Nungambakkam High Road, Madras-6.

STAGE II

CHAPTER—I

PUBLIC SERVICES AND COMPETITIVE EXAMINATIONS

CONTENTS

1. Armed Forces.
2. Madras Public Service Commission Examinations.
3. Special Class Apprentices.
4. Postal Examinations.

1. Armed Forces

Recruitment to armed forces for Inter. passed students is mainly done through a competitive examination for admission to the Military Wing of the National Defence Academy. The examinations are generally held at Allahabad, Bombay, Madras, Calcutta and Delhi. The age limits are usually 17—20. Apart from Inter. passed students the following categories of students are also generally eligible to appear for the examinations.

1. First year examination of the degree course at Delhi University.
2. Cambridge Higher School Certificate Examination.
3. Cambridge School Certificate plus one year study at a College.
4. A diploma examination in engineering.

The Examinations are on :—

English	300 marks	2½ hours.
General Knowledge and Current Affairs	300 marks	2½ hours.
Mathematics I	150 marks	2 hours.
Mathematics II	150 marks	2 hours.

Questions in English and General Knowledge will be of Inter. standard while those in Mathematics will be of matriculation standard. Applications could be obtained from the U. P. S. C., New Delhi or from the nearest recruiting office. Selected cadets will undergo some training initially and will be assigned to different services—Navy, Army and Air Force.

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2. The Madras Public Service Commission holds a competitive examination for recruitment of Harijans and members of backward classes as Junior Inspectors in the Madras Co-operative Subordinate Service for recruitment of Harijans as reserve sub-registrars in the Madras Registration Subordinate Service and for recruitment from all communities as sub-inspectors and as Assistant Fishery Demonstrators in the Madras Fisheries Subordinate Service. These competitive examinations will be a combined one and is known as recruitment to Group III services.

The exam. is of Intermediate standard and will consist of Compulsory subjects :—English Composition, General Knowledge, Language Translation and Compositions.

Optional subjects :—Three subjects from the following:

Arithmetic, Algebra, Geometry, History of India, History of England, Geography, Physics, Chemistry, Botany, Physiology, Zoology, Elementary Biology.

Eligibility conditions are :—

1. Madras Co-operative Subordinate Service, Age below 26. S. S. L. C. and pass in Co-operation, Book-keeping, Banking and Auditing exams. of a recognised co-operative Institute.
2. Madras Registration Subordinate Service :—No age limit, Intermediate.
3. Madras Fisheries Subordinate Service:—No age limit for Harijans and backward classes. For others—under 25.

Sub-Inspectors: Intermediate withNatural Science and Chemistry.

Asst. Fishery Demonstrators :—Inter. with Natural Science and Chemistry. Must have organising capacity and Physical fitness for out-door work.

3. Special Class Apprentices.

The Ministry of Railways of Govt. of India recruit special class apprentices between ages of 16—19, by competitive examinations. Selected candidates will be given training and would become officers in the Railways.

Candidates who have passed the following examinations are eligible 1. Intermediate—first or second division with Maths. and at least one of the subjects Physics or Chemistry. 2. Pre-engineering exam. of Delhi Polytechnic 3. First year examination of Delhi University degree course 4. Cambridge School Certificate with five credits including Maths. and atleast Physics or Chemistry. 5. London Matric. exam. with Maths. and Physics or Chemistry.

The selection is conducted by the U. P. S. C., New Delhi from whom application forms could be obtained. The selection Committee will interview and may hold a simple intelligence test.

Candidates will undergo practical and theoretical training for six years in Railway workshops and technical schools. During this period they will receive a stipend. On succesful completion of the course they will be absorbed in the Railways as officers.

4. Postal.

The Indian Postal Department holds 'Engineering Supervisors' competitive exam. for Inter. passed youngmen with Maths. or Physics as optionals.

STAGE II

CHAPTER—II

ENGINEERING

CONTENTS

1. Civil Engineering.
2. Mechanical and Electrical Engineering Combined.
3. Mechanical Engineering.
4. Electrical Engineering.
5. Automobile Engineering.
6. Chemical Engineering.
7. Telecommunication Engineering.
8. Radio Engineering.
9. Sound Engineering.
10. Highway Engineering.
11. Agricultural Engineering.
12. Building Engineering.
13. Architecture and Town-planning.
14. Geology and Geophysics.
15. Metallurgical Engineering.
16. Naval Architecture and Marine Engineering.
17. Harbour Engineering.
18. Aeronautical Engineering.
19. Architecture.
20. Madras Flying Club—Ground Engineering.
21. Indian Institute of Chemical Engineers.
22. Institute of Transport.

1. Civil Engineering.

INTRODUCTION

This is the oldest branch of engineering and there are established services of civil engineering in the Governmental and private services.

INSTITUTES

The following are the institutions offering degree courses :—

1. Department of Engineering and Technology, Annamalai University—4 years.
2. A. H. College of Technology, Coimbatore—4 years.
3. College of Engineering, Guindy—4 years.
4. Engineering College, Anantapur—4 years.
5. College of Engineering, Trivandram—4 years.
6. Osmania Engineering College, Hyderabad—3½ years.
7. College of Engineering and Technology, Aligarh—4 years.
8. Roorkee University—3 years.
9. Bengal Engineering College, Sibpur, Howrah—4 years.
10. The Bihar College of Engineering, Patna—4 years.
11. College of Engineering, Poona—3½ years.
12. L. D. Engineering College, Ahmedabad—3½ years.
13. Birla Engineering College, Anand—3½ years.
14. College of Engineering, Baroda—2½ years.
15. B. V. Bhoomraddi College of Engineering, Hubli—3½ years.
16. Government Engineering College, Jabalpur—4 years.
17. New Engineering College, Sangli—3½ years.
18. Morvi Technical Institute, Morvi—3 years.
19. Engineering College, Banares Hindu University—4½ years.
20. Punjab Engineering College, Roorkee—3½ years.
21. College of Engineering, Kakinada—4 years.
22. B. M. S. College of Engineering, Bangalore—4 years.
23. National Institute of Engineering, Mysore—4 years—B. E.
    3 years—A. M. I. E.
24. Indian Institute of Technology, Kharagpur—4 years.—B. Tech.

Note :—Civil Engineers who wish to specialise on housing may obtain the professional membership of the Institute of Housing, 359, Strand, London.

PROFESSIONAL INSTITUES

1. Institute of Engineers (India), 8, Gokhale Road, Calcutta.
2. Institute of Civil Engineers, Great George St., Westminster, London, S. W. 1. Grades of membership are : Student Associate and member.

3. Institute of Builders, 48, Bedford Square, London, W. C. 1. Grades of membership are student, probationer, Licentiate, associate and member.

4. Building Societies Institute, 14, Park St., London, W. 1. Grades of membership are student, associate, subscribing member and honorary member.

5. Institute of Municipal Engineers, 84, Eccleston Square, London, S. W. 1.

6. Institute of Structural Engineers, Upper Belgrave St., London, S. W. 1.

SCOPE

There is good scope for the Civil Engineer in Provincial and Central Service. Such departments as inspectorates of Light houses also have interesting jobs; Lecturers in tech. schools: lecturers in engineering and surveying, Forest Research Institute, Dehra Dun: as Secretary, Technical Information Bureau and Library Central Waterpower, Irrigation and Navigation schemes: Head Draughtsman, Railways, Asst. Engineers Roads Organisation, in Central Waterpower Irrigation, and Navigation Commission; Asst. Engineers in Salt Organisations at Bombay and Sambhar; Archaeological Engineer; Fisheries Engineer, Provincial Service; Special Construction Officers; Asst. instructors and laboratory assistants in Engineering Colleges; Community Project Engineer Officers; Railway Supervisors; Inspectors of Steam Boilers and Smoke nuisances; Asst. Inspectors of training, Ministry of Labour: Civil Engineers with structural engineering experience may be taken as structural draughtsmen in the Integral Coach Building Factories like the one at Perambur.

General Note:—1. Admissions to Engineering Colleges at Guindy, Kakinada, Anantapur, and Govt. College of Technology, Coimbatore are considered by a single committee and it is enough to send a single application to the Principal, College of Engineering, Guindy.

2. Admissions to Colleges of Engineering at Poona, the L. D. College of Engineering, Ahmedabad, and the V. J. Tech. Inst. Bombay are considered by a single committee. Applications may be addressed to the Joint Admission Board, Eliphinstone Tech. High School, Cruckshank Road, Bombay-1.

Documentary Films of Goverment of India 'Rivers in Harnass,' and 'Power for To-morrow' give glimpses of the national work for engineers.

2. Electrical and Mechanical Engineering Combined.

INSTITUTES

The following are the Institutions in this branch :—

1. Engineering College, Banares University, Banares—Degree—5 years.
2. College of Engineering, Poona—Degree—3½ years.
3. Birla Engineering College, Anand—3½ years.
4. College of Engineering, Baroda—3½ years.
5. V. J. T. Institute, Bombay—3½ years.
6. B. V. B. College of Engineering, Hubli—3½ years.
7. Morvi Technical Institute, Morvi—3½ years.

3. Mechanical Engineering.

INSTITUTES

The following are the Department of Engineering and Technology Institutions in this line:

1. Annamalai University—Degree—4 years.
2. College of Engineering, Vizag—Degree—4 years.
3. College of Engineering, Anantapur—Degree—4 years.
4. College of Engineering, Guindy—Degree—4 years.
5. College of Engineering, Bangalore—Degree—4½ years.
6. College of Engineering, Travancore—Degree—4 years.
7. Osmania Engineering College, Hyderabad—Degree—3½ years.
8. Bengal College of Engineering, Sibpur—Degree—4 years.
9. College of Engineering and Technology, Jadavpur—Degree—4 years.
10. College of Engineering and Technology, Aligarh—Degree—4 years.
11. Roorkee University, Roorkee—Degree—3 years.
12. Delhi Polytechnic—Diploma—3 years.
13. Bihar Institute of Technology, Sindri—4 years.
14. Government Engineering College, Jabalpur—Diploma—3 years; Degree—4 years.
15. Engineering College, Dayalbagh, Agra—4 years.
16. Engineering College, Banares—4 years.
17. Birla Engineering College, Pilani—3 years.
18. Punjab Engineering College, Roorkee—3 years.
19. B. M. S. College of Engineering, Bangalore—4 years.
20. Faculty of Engineering, Baroda University—3 years.
21. College of Engineering, Kakinada—4 years.
22. P. S. G. College, Coimbatore—4 years.

23. Indian Institute of Technology, Kharagpur—4 years—B. Tech.
24. L. D. Engineering College, Ahmedabad—4 years.
25. Morvi Technical Institute, Morvi—3 years.
26. V. J. T. Institute, Bombay—4 years.

PROFESSIONAL INSTITUTES

1. The Institute of Engineers (India), 5, Gokhale Road, Calcutta.
2. The Institute of Mechanical Engineers, Story's Gate, St. James Park, London, S. W. 1. Grades of membership are student, associate member, graduate member.

SCOPE

Provincial Govt. service, Indian Railway Service of Engineers; Central Govt. Department of Agriculture, Drilling Engineers; Central Ground Water Organisation; Supervising percussion drilling engineer; Central Designs Organisation, Ordnance Factories, as Inspector of Boilers, Workshop Instructors in Railways; Mechanical Engineers with Locomotive Engineering experience can have scope in as inspectors in Directorate General of Industries and Supplies, Ministry of Industry and Supply or as Examiners of stores of rolling stock.

Mechanical Engineers are employed as senior or junior assistant materials and plant officers in the Department of Transport. Director of Work centres under Department of Resettlement and Rehabilitation; as Assistant Mechanical Cultivation Engineers.

As Junior Research Officers in Wood-working and Timber Mechanics branch, Forest Research Institute, Dehra Dun; as Superintendents Development of Weapons, Ministry of Defence; Workshop Engineers and Superintendents in Polytechnics; Inspector of Factories: Customs Appraisers. Asst. Industrial Engineers, Provincial Industrial Service. General Superintendents, in Industrial Engineering Workshops. Asst. Instructors and Lab. Assistants in Engineering Colleges, Development Officers (Grade II) Pig Iron Control.

Suction dredger operators in Ports and Harbours: as Mechanical Assistants in Agricultural Service.

As Assistant Armament Supply Officers, Naval Armament Supply Organisation Naval Headquarters.

Tool Design Grade 'A' Officers, Ordnance Factories.

First class degree holders are taken as pupil engineers in harbours.

Mechanical Engineers with first aid training certificates may seek the career of safety engineers in the workshops, services and dam projects; such factories like Machine Tool factory, Jalahalli take Mechanical Engineers for design, works, methods and manufacture of tools which is growing industry in India.

As Lecturers in workshop practice at National Defence Academy and other places; also in State Transport Authorities; as Efficiency Engineers, Ordnance Factories.

4. Electrical Engineering.

INSTITUTES

The following are the Institutes offering this subject :—

1. Department of Engineering and Technology, Annamalai University—4 years.
2. College of Engineering, Guindy—Degree—4 years.
3. College of Engineering, Vizag—Degree—4 years.
4. Engineering College, Anantapur—Degree—4 years.
5. A. H. College of Technology, Coimbatore—Degree—4 years.
6. College of Engineering, Travancore—Degree—4 years.
7. Bengal Engineering College, P.O. Botanical Gardens, Sibpur, Howrah—Degree—4 years.
8. College of Engineering Technology, Jadavpur—Degree—4 years.
9. Bihar College of Engineering, Patna—Degree—4 years.
10. The College of Engineering and Technology, Aligarh—Degree—4 years.
11. The Roorkee University—Degree—3 years.
12. Delhi Polytechnic—All-India Diploma—4 years—This Diploma is considered equivalent to degrees of Indian Universities for purposes of employment in central service. Those who have not passed Inter. but have passed pre-engineering examination of this Institute are also eligible.
13. Bihar Institute of Technology, Sindri—4 years.
14. Govt. Engineering College, Jabalpur—4 years—Degree—3 years—Diploma.
15. Engineering College, Dayalbagh, Agra—4 years.
16. Engineering College, Banares University, Banares—4 years.
17. Birla College of Engineering, Pilani—3 years.
18. Punjab Engineering College, Roorkee—3 years.

19. B. M. S. College of Engineering, Bangalore—4 years.
20. College of Engineering, Bangalore—4 years.
21. Faculty of Engineering, Osmania University—3 years.
22. College of Engineering, Kakinada—4 years.
23. P. S. G. College, Coimbatore—4 years.
24. Indian Institute of Technology, Kharagpur—4 years.
25. Engineering College, Baroda—3 years—Degree.
26. L. D. Engineering College, Ahmadabad—3 years.
27. Morvi Technical Institute, Morvi—3 years.
28. V. J. T. Institute, Bombay—4 years.

SCOPE

Provincial Govt. Service; Railway Service of Engineers, Dam Projects as Junior Project Officers, As Assistant Station Engineers A. I. R., Examiner of Stores (Electrical); as Development Superintendents or Electronics and instruments under the Directorate of Technical Development, Ministry of Defence; Signals Instructors, Army Headquarters Electrical Engineers, Salt Organisations Bombay and Sambhar; as Inspectors of Factories; Technical Electrical Assistants Railways; Technical Officer Civil Aviation Department; Asst. Supts. Grade III Instruments and Electronics. Asst. Inspectors and Laboratory Assistants in Engineering Colleges.

Asst. Engineers, Central Light House Departments; Installation Engineers A. I. R., Asst. Engineers (Commercial) in the Engineering Services at Bombay and other places.

Assistant Mint Masters.

Guide Book: The Daily Mail book on "Electrical Engineers" is useful to reading in this connection.

5. Automobile Engineering.

PROFESSIONAL INSTITUTE

Institute of Automobile Engineers, 12, Hobart Place, London, S.W.1. Grades of membership:— student, probationary graduate, graduate, post-graduate, associate member and member.

The examinations of the Institution could be taken in India.

6. Chemical Engineering.

INTRODUCTION

A Chemical Engineer is responsible for installation and maintenance of plants in the manufacture of chemical products.

INSTITUTES

Degree courses are avilable as follows: —

(a) Department of Engineering and Technology, Annamalai University—4 years.

(b) The College of Engineering, Bangalore—4½ years.

(c) The College of Engineering and Technology, Jadavpur, W. Bengal—4 years.

(d) Bombay University—4 years—Department of Chemical Technology.

(e) Lakshminarayan Institute of Technology, Nagpur—4 years.

(f) Kerala Polytechnic, Kozhikode—3 years—Diploma.

PROFESSIONAL INSTITUTE

Institute of Chemical Engineers, 56, Victoria St., London, S.W.1. Grades of membership: student, graduate, associate member and member.

7. Telecommunication Engineering.

INTRODUCTION

This branch of Engineering deals with Electrical Engineering as applied to communication such as Wireless, Cables and Telephones. There is scope in the Telephone Service, Corps of Signals (Military) and in the India's Overseas Cable Service.

INSTITUTES

1. The degree in this branch could be obtained from the College of Engineering, Guindy, which has a four years course on the subject.
2. Also at Government Engineering College, Jabalpur—4 years.
3. College of Engineering—Poona.

SCOPE

As Post and Telegraph Engineers; Telecommunications developments assistants under the Directorate of Technical Development Ministry of Defence; Technical assistant to Police Wireless Departments; As Police Wireless Engineers in the Ministry of Home Affairs; also in the Telephone Cable Factory, Mihijam, West Bengal.

As Telecommunication Engineers in Indian Railways as Divisional Engineers in the Ministry of Communications. Technical Assistant, G.O.I. Overseas Communication Service, Technical Officers, Civil Aviation Department; As Aerodrome Officers; A.I.R. Technical Assistants.

Documentary Film of Government of India 'Telecommunications' illustrates work ahead in this field.

8. Radio Engineering.

St. Xavier's College Technical Institute, Cruickshank Road, Bombay—2 years—Diploma.

Sir Cusrow Wadia Institute of Electrical Technology, Poona—2 years—Diploma.

9. Sound Engineering.

St. Xavier's College Technical Institute, Cruickshank Road, Bombay—2 years—Diploma.

SCOPE

Mainly Studios, also Government of India Ministry of Information (newsreels division), also Gramaphone Companies.

10. Highway Engineering.

INTRODUCTION

Highway Engineering qualification is useful to those who wish enter careers concerned with laying out and maintaining of roads. Scope lies in the Engineering Service of the State, provinces, the Central Government and Municipalities.

INSTITUTES

The following are Institutes :—

1. College of Engineering—Vizag—Degree—4 years.
2. College of Engineering—Guindy—Degree—4 years.
3. College of Engineering—Anantapur—Degree—4 years.

The professional institute in this connection is the Institute of Highway Engineers, 55, Romney St., Westminster, London. Grades of membership are student, associate member, members and fellow.

In India the professional institute is the Indian Roads Congress, New Delhi.

11. Agricultural Engineering.

1. Indian Institute of Technology, Kharagpur—4 years—B. Tech.
2. Allahabad University.

SCOPE

Agricultural Engineers in Services.

12. Building Construction.

Indian Institute of Technology, Kharagpur—4 years—B. Tech.

13. Architecture and Town Planning.

1. Indian Institute of Technology, Kharagpur—4 years—B. Tech.
2. Bombay University—5 years.

SCOPE

As architects, assistant architects, junior architects and consulting architects.

14. Geology and Geophysics.

Indian Institute of Technology, Kharagpur—5 years—(3 years undergraduate and 2 years post-graduate)—B. Tech.

15. Metallurgical Engineering.

Bengal Engineering College, Sibpur—4 years course leading to B. (Met.) of Calcutta University.

16. Naval Architecture and Marine Engineering.

INTRODUCTION

Qualifications in this field is suitable for Service in the Merchant Navy. Firms and workshops concerned with the making and maintaining of ships require training in the above subjects.

INSTITUTES

At present there is a degree course (proposed) at the Vizag College of Engineering with duration of four years leading to a degree.

(b) Inter. passed students could also enter the service of the merchant fleet and after two years of service on a sea-going vessel could obtain training with Scindia Navigation Company which will qualify for posts of Marine Engineer.

PROFESSIONAL INSTITUTE

(1) Institute of Marine Engineers, 85, Minories, London, E. C. 3.

(2) Institute of Naval Architects, 10, Upper Belgrave St., London, S. W. 1.

17. Harbour Engineering.

INTRODUCTION

There is fair scope for careers as Port Engineer, Dredger Engineers and similar positions in the various Harbours of India. Candidates can qualify for such posts if they obtain Board of Trade (B.O.T.) certificates first or second class.

INSTITUTES

(a) The course is at present available at the Nautical and Marine Engineering College, Azad Maidan, Fort, Bombay-1.

Those who wish to enter the course for Marine Engineer, must have passed Inter. Science with Mathematics and have obtained 50% marks in the aggregate or over. Candidates should also be between 16 years and 19 years of age on the 1st March of the year of entry. Candidates should be prepared to come for an interview by the Director of Marine Engineering Training at Bombay or Calcutta. Selected students would be put as a apprentice at Bombay or Calcutta Naval Workshops or Ports for a period of three years. On the successful completion of this they will go to Marine Engineering College, Calcutta, for an intensive course as cadets for one year. Successful cadets will be awarded the final passing out certificates. Total expenses approximate to Rs. 6,200. Each cadet receives approximate Rs. 4,320 as apprenticeship wages for the total three years. He can also win one of the five merit Scholarships to the value of Rs. 600 per year if he does well in Examinations.

Applications must be addressed to the Director of Marine Engineering Training, Azad Maidan, Fort, Bombay.

Applications may also be addressed to the Directorate of Marine Engineering, 30, Gorachand Road, Calcutta-14.

(b) The newly started Indian Institute of Technology, Gorakpur, has a course on Naval Architecture. Duration—5 years. Degree—B. Tech.

SCOPE

Naval Establishments; Technical Assistants in Indian Navy, Dredger Engineers in Ports and Harbours, As Engineer officers on training ships like " Bhadra " and " Mekhala," Marine Superintendent, Assam Railways, As Assistant Navigation Directors in the

Central Water Power, Irrigation and Navigation Commission, Ministry of Works, Mines and Powers, Marine Superintendent Southern Railways; Port Engineers in Harbours like Vizag., Madras, Bombay. Cochin and Kandala ; as Assistant Manager Constructive Department, the Dockyard, Bombay; understudy to the Engineer and Harbour Master, Port Blair and other Ports; as Mechanical Superintendents in ports ; also as contractors for repair of ships in Harbours ; as Chief Engineers on Steam Tugs; Tug Engineers and floating Dock Supervisors ; as Engineer and Ship Surveyor under the office of the Director General of Shipping, Goverment of India.

18. Aeronautical Engineering-Degree.

INTRODUCTION

Aeronautical Engineering is an useful subject for those who wish to seek a career in firms manufacturing Aeroplanes, or those engaged in servicing and maintaining them.

INSTITUTES

(1) Degree courses on this subject is proposed at the College of Engineering at Vizag., which lasts four years. Intermediade passed students are eligible to apply.

18-1. Aeronautical Ground Licences.

Those who wish to qualify for the Ground Engineers 'A' and 'X' licenses issued by the Directorate of Civil Aviation may apply for the course conducted by the D.G.C.A., New Delhi.

Details of the scheme for the training of Ground Engineers at the Government Civil Aviation Centre, Allahabad, are as follows:

Qualifications :—Intermediate Science or its equivalent or Senior Cambridge Examinations with Maths., Physics and Chemistry or Licentiate in Mechanical Engineering of the Victoria Jubilee Technical Institute, Bombay or its equivalent. Previous experience :—It is desirable that the candidates have at least one year's previous experience in Aircraft repair and overhaul workshop or a flying school workshop, automobile repair workshop or any important mechanical workshop.

Age :—Not under 18 or over 23 years. An extension to 25 years is granted to graduates in Aeronautics, Engineering, Mathematics and Physics.

Physical Fitness :—Candidates must be fit for hard work in workshops.

Candidates must be prepared to execute an agreement with the Government for 3 years service with civil aviation and to join I.A.F. reserve if required.

The duration of the course is 3 years. A fee of Rs. 1,200/- per annum is payable in three equal instalments. Accommodation is free but boarding charges will be recovered. Selection will be made after due announcements in the Press.

Recognised practical training at :—

1. Hindustan Aircraft, Bangalore.
2. Air India.
3. Indian National Airways.

PROFESSIONAL INSTITUTE

Royal Aeronautical Society, 4, Hamilton Place, London, W. 1.

SCOPE

Service with airway companies; also as inspectors or senior inspectors of aircraft (G.O.I.) Captains of aircraft, Technical Managers, Technical Journalism, Test Pilots, Instructors on aeronautical subjects; as assistant aerodrome officers; appointments in Civil Aviation Departments.

19. Architecture.

The Degree of B. Arch. offered by the Bombay University is a five years course. There is an entrance examination for selection. Candidates must have passed Inter. in Drawing (Bombay Government Examination) or an equivalent.

SCOPE

Junior Architects; as artist and layout expert in offices like Chief Adviser of Factories; Consulting Architects; Town Planning Officers and Designers.

20. The Madras Flying Club at Meenambakkam.

The Madras Flying Club at Meenambakkam offers facilities to apprentices in Ground Engineering to obtain necessary practical

experience to enable them to sit for the Ground Engineer's Examinations in categories A, B, C, D and X, Ground Engineer's Licenses fall under the following 5 categories :

A & C :—An apprentice should have not less than 2 years experience in aircraft and aero engine maintenance and construction and should satisfy the Chief Ground Engineer of the Madras Flying Club as to his ability before he can be recommended to the Govt. of India for the examination.

B & D :—The Apprentice should be in possession of A and C Licenses before he can apply for B and D Licenses. He should have not less than 4 years experience in aircraft and aero engine construction including overhaul and testing of material. The candidate should satisfy the Chief Ground Engineer of the Madras Flying Club as to his ability before he can be recommended for these examinations.

X :—The Apprentice should have had such practical experience of the particular work of which the licence is required as in the opinion of the Chief Ground Engineer will enable him to pass the requisite examination before he can be recommended for the examination.

According to the Indian Aicraft Rules, a candidate must have attained the age of 21 years before he can obtain a Ground Engineer's License.

Apply :—Honorary Secretary and Treasurer, Madras Flying Club Ltd., St. Thomas Mount, (Madras).

Note:—The monthly Bulletin of the International Civil Aviation Organisation is an useful guidance material for people in this career of aviation. Also the journal of the Aeronautical Society of India, New Delhi is an useful Bulletin to follow if one is considering this career.

The Documentary Film on Civil Aviation gives highlight on different scopes in this field.

21. Indian Institute of Chemical Engineers.

5/2, Garstin Place, Calcutta is a professional body for the improvement of the science of chemical engineering. It has the following grades of membership open to students.

1. *Student members*:—Candidates must be in training at a recognised college or institute for chemical engineering or he must be qualifying himself for the profession of chemical engineers.

2. *Graduate members*:—Age—not less than 20. Candidate must have a graduate degree exam. in the subject or be trained in the profession after a general science degree.

3. *Associate members*:—Age not less than 25. Candidate must have passed the associate membership exam. or must be engaged in the profession as chemical engineer.

4. *Members*:—Age not less than 35. He must be engaged in the profession of Chemical engineering. He must be an associate member and have five years experience in the field.

Others who are teachers of this subject or who have held responsible positions in Chemical industry for a considerable period may write to the Institute for membership qualifications.

22. Institute of Transport.

Transport is important in a country like India and many Governments are actively running and expanding the nationalised scheme of Transport. Apart from engineering knowledge career in Transport requires special qualifications aud studies. The Institute of Transport, 80, Portland Place, London is a professional body which conducts the graduateship and associatemembership exams. Centres are arranged in India if there are sufficient candidates, persons in transport offices or works including Railway would be eligible to apply for membership of this institute whose professional status is recognised.

This is an useful qualification for higher posts of Service Managers, Assistant Traffic Managers and Traffic Managers.

STAGE II

CHAPTER–III

COMMERCE

CONTENTS

1. List of Colleges of Commerce.
2. Accountancy.
3. Actuaries.

1. Colleges in India with facilities for instruction in Commerce.

Agra University.

1. Balwant Rajput College, Agra.
2. Radhaswami Educational Institute, Agra.
3. St. John's College, Agra.
4. Government College, Ajmer.
5. Barahseni College, Aligarh.
6. Bareilly College, Bareilly.
7. Hamdia College, Bhopal.
8. S.M. College, Chandausi.
9. D.A.V. College, Dehradun.
10. M.H. Harijan College, Ghaziabad.
11. M. P. College, Gorakhpur.
12. St. Andrew's College, Gorakhpur.
13. D.A.V. College, Kanpur.
14. S.D. College, Kanpur.
15. N.R.E.C. College, Khurja.
16. Kishori Roman College, Mathura.
17. Meerut College, Meerut.
18. Coronation Hindu College, Moradabad.
19. K.G.K. College, Moradabad.
20. Darbar College, Rewa.
21. Ahir Kshatriya College, Shikohabad.

Andhra University, Waltair.

1. West Godavari College, Bhimavaram.
2. Andhra Christian College, Guntur.
3. Pittapur Raja's College, Kakinada.
4. Hindu College, Masulipatam.
5. Venkatagiri Raja's College, Nellore.
6. College of Arts & Commerce, Waltair.

Bombay University, Bombay.

1. R.A. Podar College, Bombay.
2. Sydenham College of Commerce and Economics, Bombay.

Baroda University.

College of Commerce, Baroda.

Calcutta University, Calcutta.

1. Asutosh College, Calcutta.
2. Bangabai College, 18, Scott Lane, Calcutta.
3. City College, 102/1, Amherst Street, Calcutta.
4. City College (Commerce Department), Calcutta.
5. Seth Anandram Jaipuria College, Calcutta.
6. St. Xavier's College, Calcutta.
7. Surendranath College, Calcutta.

Delhi University, Delhi.

1. Delhi School of Economics.
2. College of Commerce, Delhi.
3. Anglo Arabic College, Delhi,

} Commerce as an optiona subject only.

Gauhati University.

1. J.B. College, Jorhat.
2. Karimganj College, Karimganj.
3. Gurcharan College, Silchar.
4. St. Anthrowj's College, Shillong.
5. St. Edmund's College, Shillong.

Gujarat University.

H. L. College, Ahmedabad.

Karnatak University.

J.G. Commercial College, Hubli.

Lucknow University.

Canning College, Lucknow.

Madhya Bharat University.

Holkar College, Indore.

Madras University.

1. Veerasaiva College, Bellary.
2. Government Arts College, Coimbatore.
3. P.S.G. Arts College, Coimbatore.
4. Government College, Cuddappah.

5. Farook College, Feroke.
6. Pachaiyappa's College, Kancheepuram.
7. Osmania College, Kurnool.
8. Loyola College, Madras.
9. Pachaiyappa's College, Madras.
10. Sir Theogaraya College, Madras.
11. Vivekananda College, Madras.
12. American College, Madura.
13. Theogarayar College, Madura.
14. St. Aloysius College, Mangalore.
15. Raja's College, Pudukkottai.
16. Sacred Heart College, Thevara.
17. St. Joseph's College, Tiruchirapalli.
18. Sri Kerala Varma College, Trichur.
19. Mahatma Gandhi Memorial College, Udipi.
20. Islamia College, Vaniambadi.

Mysore University.

1. Commercial College, Bangalore.
2. D.B. Commercial College, Mysore.

Nagpur University.

1. Shri Shivaji College, Amraoti.
2. G.R. College of Commerce, Wardha.

Osmania University.

1. Vivick Vardhini College, Hyderabad.
2. Badiuka College of Commerce.
3. Mahboob College, Sikandrabad.

Patna University.

1. Harparshad Jain College, Arrah.
2. T.N. Jubilee College, Bhagalpur.
3. Marwari College, Bhagalpur.
4. Rajendra College, Chapra.
5. Chandradhani Mithila College, Dharbhanga.
6. Ganga College, Ganga.
7. Sucheidavander Sinha College, Ganga (Aurangabad).
8. Koshi Collcge, Khagaria.
9. Ganesh Dutt College, Monghyr, (Begusarai).

10. R.D. & D.J. College, Monghyr, (Begusarai).
11. Ramdyalu Singh College, Muzaffarpur.
12. Purnea College, Purnea.
13. St. Xavier's College, Ranchi.
14. D.A.V. College, Siwan.

Poona University.

Briham Maharashtra College, Poona.

Punjab University.

1. University College of Commerce, Karnal.
2. Ahir College, Rewari.
3. Bikram Commercial College, Faridkot.
4. Vaish College, Rohtak.

Rajputana University.

1. Raj Rishi College, Alwar.
2. M.S.J. College, Bharatpur.
3. Intermediate College, Chirawa.
4. Lohia College, Chura.
5. S.P.U. Intermediate College, Falna.
6. Seth G. R. Chamana College, Fatehpur.
7. Maharaja's College, Jaipur.
8. Shri Swaroop Govind Parook Vidyalaya, Jaipur.
9. Jaswant College, Jodhpur.
10. Shri Maharaja Kumar College, Jodhpur.
11. Herbert College, Kotah.
12. Seth G. B. Podar College, Nawalgarh.
13. Birla College, Pilani.
14. Maharana Bhopal College, Udaipur.

Saugor University.

Govindram Sakseria College, Jubbulpore.

Travancore University.

S. D. College, Alleppy.

Utkal University.

1. Rajendra College, Bolangir.
2. Government College, Sambolpur.

2. Accountancy.

After passing Intermediate exam., the candidate may attend for a year a recognised commercial training institution. After which he may appear for the Chartered Accountant examinations which consists of the first and the final examination in two groups each. The Institution which conducts the examination and gives the certificates is the Institute of Chartered Accountants of India, 98-102, Gurdwara Road, Hutments, Talbatora Road, New Delhi.

Delhi Polytechnic:—Chartered Accountants' Course Part I prepares for the part I examination. The duration is 10½ months. Candidates will be selected for the course after an interview.

PROFESSIONAL INSTITUTES

1. Institution of Chartered Accountants of England & Wales, Moorgate Place, London, E.C. 2.
2. The Societies of Chartered Accountants of Scotland, 142, St. Vincent St., Glasgow.
3. The Association of Certified and Corporate Accountants, 22. Bedford Square, London.
4. The Institute of Municipal Treasurers and Accountants, 1, Buckingham Palace, Westminster, London, S. W. 1.
5. Institute of Costs and Works Accountants, 23, Queen Square, London, W. C. 1.

SCOPE

Chartered Accountants may be employed as Junior Sales Tax Officers; Bank Agents; Registrar of Securities.

3. Actuaries.

Actuaries is the science dealing with mortality probabilities. Qualified Actuaries are employed in Insurance and allied firms. Candidates who have good aptitude for mathematics may take up study in this branch after registering with the Institute of Actuaries, Staple Inn Hall, Holborn, London. They have to take a preliminary

examination in English and Mathematics. There are four examinations which have to be passed before a fellowship is awarded. Candidates should write to the Secretary, Institute of Actuaries, Staple Inn Hall, London, who also have a tutorial service on this course. Mathematics honours graduates with second class are exempted from the preliminary examination.

STAGE II

CHAPTER—IV

TECHNOLOGY

CONTENTS

1. Chemical Technology.
2. Leather Technology.
3. Textile Technology.
4. Ceramic Technology.
5. Glass Technology.
6. Diploma in Soap-manufacture.
7. Cinematography and Sound Technology.
8. Sugar Technology.
9. Oil Technology.
10. Fuel Technology.

1. Chemical Technology.

INSTITUTES

1. College of Technology, Banares University, Banares—Degree—in Industrial Chemistry—2 years. Ceramics and Pharmaceutics—3 years.

2. Delhi Polytechnic, Delhi—All India Diploma—4 years (Paints, pigments, varnishes, oils, soaps, fats, intermediates, dyes, ceramics, plastics.

3. Jeypore Vikramadeo College of Science and Technology, Andhra University, Degree—3 years course in foods and drugs and general chemical technology.

2. Leather Technology.

INSTITUTES

Calcutta University—Diploma course in tanning—three years open for I.Sc. with Mathematics, Physics and Chemistry.

Address :—The Bengal Tanning Institute,
Canal South Road, Calcutta.

3. Textile Technology.

INSTITUTES

The following are the institutes in this branch :—

1. Krishnarajendra Silver Jubilee Technological Institute, Bangalore—Degree—3½ years (Intermediate with M. P. C. group).
2. V. J. T., Institute, Bombay—Degree—4 years—Bombay University.
3. Rayalaseema Polytechnic, Bellary—Diploma—3 years.
4. Delhi Polytechnic—All India Diploma in Textile Technology—3 years course—training is obtained in cotton spinning, weaving, designing, bleaching, dyeing, finishing, Textile Technology and testing. Textile engineering, Organisation, planning and cotton economics.
5. P. S. G. College of Technology, Coimbatore—3 years—Diploma—Textile Manufacturing Technology.

SCOPE

Textile factories ; as lecturers in textiles.

4. Ceramic Technology.

INSTITUTES

1. B. Sc. (Ceramic) Technology is available at Banares Hindu University, Duration—3 years.

SCOPE

Provincial Industries Service ; Works superintendents in Ceramic factories and workshops. In concerns making decorative floor tiles, in sanitary fittings manufacturing companies : Mysore and Gwalior Porcelain Companies.

SCOPE

Manufacturing companies of products such as decorative flooring, sanitary fittings, porcelain wares.

5. Glass Technology.

INSTITUTES

1. B. Sc. (Glass) Technology is available at Banares Hindu University—Duration—3 years.

SCOPE

In glass manufacturing concerns like Scientific Glass Apparatus Co., Calcutta. Brosil Glass Works, Bombay-7, Mysore Lamps Co., Bengal Lamps Co.

6. Diploma in Soap Manufactnre.

INSTITUTES

1. At Banares University—two years.

7. Cinemotography and Sound Technology.

INTRODUCTION

There is scope as sound engineers and camera engineers in the films studios as well as in the service of Departments of Information of the Central Government.

INSTITUTES

Qualification in the field are available at the Government School of Technology, Madras, which has a four year diploma course.

SCOPE

Studios, Govt. of India Films Division, Bombay as Cine Cameraman, Press Information Bureau, G. O. I.

8. Sugar Technology.

INTRODUCTION

Sugar and confectionaries manufacture is now an established industry in India and careers in these fields are worth consideration. There are sugar factories at Vuyyur, Nellikuppam and Kanpur which require trained personnel.

INSTITUTES

1. The Indian Institute of Technology at Kanpur has a one year diploma course in sugar-boiling.

9. Oil Technology.

1. This subject is available as a three years course of study at the Oil Technological Institute, Anantapur. The Diploma course prepares candidates for posts like supervisors, foreman and other section heads in oil and allied industrial plants. Candidates must have passed Intermediate with Mathematics, Physics and Chemistry as optional. Candidates should be under 20. Three scholarships of the value of Rs. 25/- per month are awarded for deserving students.

2. B. Sc. (Technology)—4 years—Lakshminarayan Institute of Technology—Nagpur.

10. Fuel Technology.

1. B. Sc. (Technology)—4 years—Lakshminarayana Institute of Technology, Nagpur.

2. B.Sc. (Technology)—4 years—Banares University.

STAGE II

CHAPTER—V

PROFESSIONAL COURSES

CONTENTS

1. Agriculture.
2. Veterinary Science.
3. Medical Colleges.
4. Dental Surgery.
5. Forestry.
6. Indian Medicine.
7. Medicine—Ancient and Modern.
8. Pharmacy.
9. Nursing.
10. Law.
11. Home Science.

1. Agriculture.

The following are the institutions offering agricultural degree course:

1. Agra University—B. Sc. (Agr.)—2 years courses at Agricultural College, Kanpur.
2. Allahabad University—B.Sc. (Agr.)—2 years.
   Allahabad University—B.Sc. (Agr. Engineering.)—2 years.
3. Andhra University—B.Sc. (Agr.)—3 years course at Agricultural College, Bapatla.
4. Banares Hindu University—B.Sc. (Agr.)—3 years.
5. Bombay University—B. A.—Agricultural College. Anand—B.Sc. Agr.—3 years.
6. Delhi University—B.Sc. (Hons.) (Agr.)—Central College of Agriculture—4 years.
7. Madras University—B.Sc. (Agr.)—3 years—at College of Agriculture, Coimbatore.
8. Nagpur University—B.Sc. (Agr.)—3 years at College of Agriculture, Nagpur.
9. Osmania University—B.Sc. (Agr.)—3 years.
10. Punjab University—B.Sc. (Agr.) at
    (a) Government Agricultural College, Ludhiana.
    (b) Khalsa College, Amritsar.
    (c) Brijindra College, Faridkot.
11. Poona University—College of Agriculture, Poona.
12. Government Agricultural College, Sabour (Bihar University).
13. Agra University—Balwant Rajput College, Agra; K.E.M.U., Jat College, Lakhoti; Jat Vedic College, Barut; Madya Bharat College of Agriculture, Gwalior.
14. Gauhati University—Agricultural College, Jorhat—B.Sc.
15. Karnatak University—Agricultural College, Dharwar—B.Sc.

SCOPE

Agricultural Demonstrators, Soil Chemists in Research Station (sugarcane) Shahajahanpur; Wheat Breeder in Co-ordinated Wheat Rust Control Scheme; Statistics Research Officer in the Indian Council of Agricultural Research: Fruit Canning Research Station,

Quetta ; Agricultural Officer, Cattle breeding Farm Jubbalpore : Asst. Agronomists class II service : Gazetted assistants to oil seeds specialist for the Cocoanut Nursery Scheme ; upper subordinates in provincial agricultural services (appointment in research sections of the service are in Paddy, Cotton, Millets, Oil seeds, Pulses, Botany, Sugarcane, Chemistry, Entomology, Mycology, Physiology. Oytogenetics) Community Project Officers ; As Lecturers in Agricultural Colleges.

As farm assistants in the Central Indian Coconut Research Station, Kasargad.

As Agricultural officer in milk colonies like the ones at Aarey (Bombay) and Ayyanavaram (Madras).

Town compost officers.

Sugarcane specialists, Sugarcane Research Station, Padegaon Asst. Conservator of Forests, Bombay and other state services.

Technical Assistants, Chinchona Departments. Those who have degrees in Agriculture and Botany may be appointed as Economic Botanists in Govt. service ; Soil Conservation Officers ; Extra Assistant Directors of Agriculture for Soil Conservation. Superintendents in Dairy cum Bull farms.

Useful Magazines: Govt. of India " Indian Farming " monthly, available from Business Manager, " Indian Farming ", 505, Arthur Road, Tardeo, Bombay-7. This magazine is useful for educated farmers.

2. Veterinary Courses.

INSTITUTES

The following are the courses available :—

1. The Madras Veterinary College has a B. V. Sc. Veterinary course of four years and three months in duration.
2. Agra University :—Three years course for B.Sc. in Veterinary Science and Animal Husbandry, course is held at U. P. College of Veterinary Science and Animal Husbandry at Mathura.
3. Osmania University :—Degree B. V. Sc.—4 years.
4. Punjab University :—Degree B. V. Sc.—4 years at Punjab Veterinary College, Hissar.
5. Bombay Veterinary College, Bombay—Degree—4 years

SCOPE

Scope for veterinary science graduates lies in appointments as veterinary surgeons in the State Animal Husbandry Service, private practice, work in Stud Farms like Kunegal Stud Farm, Mysore; Sheep and Goats Development Officers, Diseases Investigation Officers and allied services. There is also scope in Poultry Research Stations at the Indian Veterinary Research Institute.

Also as Asst. Research officers, Animal Genetics Section, Veterinary Research Institute, Izatnagar; Asst. Research Officers, Indian Veterinary Research Institute, Mukteswar, Kumaun. Foot and mouth diseases Research Officer: also in the Indian Council of Agricultural Research Scheme for investigation into Tuberculosis and Johne's disease of animals; as Cattle Superintendents in substations like Karnal. The Govt. farms at Gurdspur, Izatnagar and Lucknow have a Poultry Training course leading to a Govt. certificate. Veterinary graduates are also taken as Junior Commissioned Officers in Remount Veterinary and Farms Corps of Armed Forces. Candidates should apply to offices R.V.F.C., Meerut Cantt.

Also field work on "Key Farms" schemes such as the Mysore State farm at Hessarghatta.

Research assistants (Mastitis) at Indian Veterinary Research Institute.

Serologists in charge of Serum Laboratories.

Poultry Disease Control Officers.

Superintendents of markets and slaughter houses.

District Livestock officers in the several provincial Governments.

The Professional Institute in India is the All-India Veterinary Association, 26, Wallajah Road, Mount Road, P. O., Madras.

The Documentary Film of Govt. of India "Mute Martys" Illustrates the need for this service in India.

3. Medical Colleges.

The following is a list of Medical Colleges offering degree courses.

1. Medical College, Vizag (Andhra University).
2. S. N. Medical College, Agra.
3. Medical College, Guntur.
4. Grant Medical College, Bombay.
5. Medical College of Calcutta, at 88, College Street.
6. Campbell Medical College, Calcutta.
7. Medical College, Lucknow.
8. Stanley Medical College, Madras.
9. Madras Medical College, Madras.
10. The Medical College, Vellore.
11. Medical College, Mysore.
12. The Prince of Wales Medical College, Bankipur.
13. Orissa Medical College, Cuttack.
14. Lady Hardinge Medical College, New Delhi (Women Only).
15. Seth Sunerdas Medical College, Bombay-12.
16. B. J. Medical College, Ahmedabad.
17. Topiwala National Medical College, Bombay.
18. Currimbhoy Ibrahim Dental College, Bombay.
19. Sarojini Naidu Medical College, Agra.
20. G. R. Medical College, Gwalior.
21. M.G.M. Memorial Medical College, Indore.
22. Baroda Medical College, Baroda.
23. National Medical College, 32, Gorachand Road, Calcutta.
24. R.G. Kar Medical College, 1, Belgachia Road, Calcutta.
25. Assam Medical College, Dibrugarh.
26. Medical College, Nagpur.
27. Osmania Medical College, Hyderabad.
28. The Dharbanga Medical College, Dharbanga.
29. Glancy Medical College, Amritsar.
30. Sawai Mansing Medical College, Jaipur.
31. Birla College, Pilani (Pharmacy).
32. S. B. Medical College, Cuttack.
33. Medical College, Trivandram.

Other institutions having courses on allied subjects :—

1. All India Institute of Hygiene and Public Health, Calcutta.
2. College of Nursing, New Delhi.
3. College of Nursing, Vellore.
4. Calcutta School of Tropical Medicine, Calcutta.

Medical College, (Unani).

Tibbiya College, Aligarh Muslim University has a five year course on this subject.

Medical College (Ayurveda) The College of Ayurveda,—Banaras Hindu University—Duration is six years.

SCOPE

1. Medical men with diploma in Public Health have scope as Inspector of Factories.
2. As Medical Officers in settlement areas.
3. Provincial Medical Service.
4. Private Practice.
5. Malaria Officers in Ant-malaria Organisation, Kutch and other places.
6. Port Medical Officers.
7. Medical Officers in Indian Government Railways.
8. Asst. Surgeons, Medical Department, Government of Tanganyike.
9. Medical Officers, Coal Mines Labour Welfare Fund, Dhanbad.
10. Medical Biologists.
11. Medical Radiologists.
12. As Medical Refrees, State Insurance Corporations.

4. Dental Surgery.

1. B.D.S. Bombay University—4 years after Intermediate—Group : Physics, Chemistry, Biology—Sir C. E. M. Dental College, Bombay-8.
2. B. D. S. Lucknow University—4 years after Intermediate. Also short course 2 years for Medical graduates.
3. The Calcutta Dental College—144, Lower Circular Road, Calcutta.

Notes for Qualified Medical Men.

The M.B. graduates are taken as lecturers in different medical colleges or as demonstrators. Women doctors are employed as Assistant Surgeons in Railways grade II for which L.C.P.S. and L.M.P. are also eligible. Doctors are taken as Administrative Medical Officers, Employees State Insurance Schemes.

The W.H.O. publishes technical reports (series) which are useful forpe rsons making career in public health and similar fields.

The Patna Journal of Medicine Published by Patna Medical Association is an useful guidance to private and other Medical Practitioners. Other journals useful in this connection are :

Indian Medical Record, P.O. Box 8957, Calcutta ; Indian Medical Review, 48-B, Sankaritala St., Calcutta ; Indian Journal of Surgery of the Association of Surgeons, 207, Poonamalle High Road, Madras-7. The Indian Medical Gazette, Calcutta and the 'Indian Physician' Backbay View, New Queen Road, Bombay-4.

The Medical Information Department of Boots Pure Drug Co., (India) Ltd., Asian Building, Nicol Road, Ballard Estate, Bombay, is useful to contact.

Note :—(1) For admission to Grant Medical College, Medical College, Poona, and Medical College, Ahmedabad, a single application may be made to Surgeon-General with the Government of Bombay, Contractor Building, Nicol Road, Ballard Estate, Fort, Bombay. A few seats are reserved for students from South Africa, Afghanistan, Nepal, Burma, Kashmir, Siam and Indonesia.

(2) A single application is also sufficient for consideration of admission to Medical Colleges of Madras State. The Medical College, Vellore has a selection examination for admissions.

Documentry Films of Government of India 'First Steps', 'Friend and Foe', 'The War that never ends', 'Planned Parenthood', 'Blossoms Revived', 'Dirty habits', 'They live again', 'Your Baby', 'Beat T.B.', 'Personal Hygiene', 'Blood Banks', 'Yoga for Health', 'Mosquitos Menace', and 'Marked Man' all give glimpses of the National work for men in this line.

FORESTRY

INTRODUCTION

In India we have all kinds of forests from the tropical to Alpine types.

The career as a forest ranger or a forest officer may suit the type of young man fond of open air life and adventure. The Forest College at Dehra Dun conducts a two year course. Enquiries should be addressed to the :

(1) President, Forest Research Institute and College, New Forest P.O., (Dehra Dun).

(2) Principal, Forest College, Coimbatore.

Conditions for recruitment as forest apprentices in the Madras Forest Subordinate Service are as follows :

Qualifications :—Intermediate Examination with one or more of the following as optional subjects : Maths., Physics, Chemistry, Botany and Zoology. Preference will be given to those who have offered Botany in the S.S.L.C. Examination. Age should be under 21· There will be a qualifying examination in :

English Prose (Dictation).
Essay in English.
Mathematics (Arithmetic, Algebra and Geometry).
General Knowledge.

The standard will be that of Matriculation. Selected candidates will undergo two years course at Coimbatore Forest College. The advertisements for such courses will appear through Madras Public Service Commission to whom the candidates should apply.

SCOPE

Forest area as like Andaman, Forest Development Department, as Development Officers (Timber Development Wing.); as Asst. Executive Engineers, Military Engineer Service.

Documentary Film of Government of India "Green Glory" gives an illustration of the forest wealth of India. This may be seen by those interested in this career.

Note :—There is a 2 years diploma course in Forestry at the University of Travancore.

6. Indian Medicine.

1. The College of Indian Medicine, Kilpauk, Madras, provides training to enable candidates to become practioners of various systems of Indian Medicine like Ayurveda, Siddha and Unani. Instruction in Modern Sciences of Anatomy, Physiology, Surgery, Midwifery and opthalmology are also included. The course lasts five years. Candidates should have passed in any two science subjects in their optional part III preference being given to those who have offered Chemistry and Biology. Candidates should have passed part II language in Sanskrit for Ayurveda, Tamil for Siddha and Urdu for Unani. Successful candidates will have the designation, G.C.I.M.

2. The B.A.V. (Bachelor of Ayurvedas) of Andhra University degree course admits Intermediate passed students who have offered Sanskrit under part II and Physics, Chemistry, Natural Science under part III. Other candidates will have to take a preliminary examination. The full course is five years.

7. The Bachelor of Medicine and Bachelor of Surgery in the faculty of Medicine–Ancient and Modern.

6 years course Lucknow University—Intermediate with Sanskrit or Hindi.

8. Pharmacy.

Since the Drug Act Pharmacy has come into increasing importance and qualification in this line has become a necessity for running of dispensaries both public and private. Courses in Pharmacy are available at :

1. Andhra University, B. Pharmacy—3 years.
2. Banares University, B. Pharmacy—3 years.
3. Madras University, B. Pharmacy—3 years (At Madras Medical College).
4. Agra University, B. Pharmacy—2 years (at L.M. College of Pharmacy, Ahmedabad).
5. Bombay University, B. Pharmacy—5 terms.
6. Rajaputana University, B. Pharmacy—3 years. (at Birla College, Pilani).
7. Gujarat University, B. Pharmacy—3 years.
8. University of Saugar, Saugar, B. Sc. Pharmaceutical Chemistry and Pharmacy.
9. Khalsa College, Amritsar—3 years.

SCOPE

Manufacturers like Alembics, established concerns like May and Baker, also in Central Drugs Laboratory of Government of India, Assistant Drug Control Officers, employment in Armed Forces, Medical College, Poona : as J. S. O's Assistant to Chemical Examiners (Government), Squibbs Co., Government Penicillin Factory, Poona. Also as Technical Officers, Central Drug Standard Control Organisation.

Membership of the Pharmaceutical Society is a desirable qualification for drug inspectors post. Other posts are generally available with drug and medical companies like Teddington Chemical and

Pharmacauetical works (Calcutta, Bombay and Kanpur); also there are positions like technical press work, and as writers in the journals of learned societies in this line.

9. Nursing

1. Calcutta University—4 years degree course.
2. Madras University—4 years degree course (Medical College)
3. College of Nursing, 12, Jaswant Singh Road, New Delhi —4 years degree course.

SCOPE

As Matrons; as Teaching Sisters: as Nurses or section wards in hospitals; also employment in Defence Forces and the Directorate General of Health Services; the W.H.O. and other organisations.

10. Law

Poona University, LL. B.—3 years
Bombay University, LL. B. ,,
Karnatak University, LL. B. ,,

11. Home Science

1. B.A. Degree—3 years—Woman's University. Bombay.
2. B. Sc. (Hons.) Degree course—3 years—Delhi University.
3. B. Sc. Pass ,, ,, —2 years—Madras University.
4. B. Sc. Pass ,, ,, —2 years Allahabad University.

Note:—Graduates with Home Science could take up diploma course iu Dietetics at the All India Institute of Hygiene and Public Health, Calcutta. This additional qualification is useful in such appointments as Mess Superintendents in the Defence Service, Hospitals, Colleges and Hostels.

STAGE II

CHAPTER—VI

GENERAL.

CONTENTS

1. Flying.
2. Psychology.
3. Labour Welfare Training Course.
4. Flue Curing.
5. Technical Training—Timber and Wood.
6. Social Work.
7. Geology.
8. Journalism.
9. Printing.
10. Architecture.
11. Teaching.
12. Teaching of the Deaf.
13. Physical Education.
14. Laboratory Technic.
15. Librarianship.
16. Domestic Science Training.
17. B.Sc. in Anatomy and Embryology.
18. Mining.
19. Metallurgy.
20. Applied Physics.
21. Professional Societies.
22. Social Services.
23. Diploma in Russian.
24. Diploma in French and German.
25. Diploma in Italian.
26. Scholarships.
27. Scholarships for Harijans.
28. Indology.

1. Flying

Careers as pilots and navigators are increasingly gaining in importance and there are good jobs for trained men in the field. The following is a list of flying clubs in India :—

Delhi :—Delhi Flying Club, Delhi (Safdar jung Aerodrome, New Delhi 5.
Northern Indian Flying Club, Jullundar.
Jodhpur Flying Club, Jodhpur.
Jaipur Flying Club, Jaipur.

Allahabad :—Hind Provincial Flying Club, Lucknow.
Bihar Flying Club, Patna.

Bombay :—Bombay Flying Club, Juhu Aerodrome.
Madya Pradesh Flying Club, Nagpur.
Hyderabad State Flying Club, Hyderabad.

Calcutta :—Bengal Flying Club, Barrackpore.
Assam Flying Club.
Orissa Flying Club., Bhubaneshwar.

Madras :—Madras Flying Club, Meenambakkam.

Mysore :—Mysore State Flying Club, Bangalore.
Govt. Flying Training School, Yelahanka Post, Bangalore.
Jakkur Aerodrome.

After a priliminary training in these clubs candidates will be given training by the Civil Aviation Directorate upto 'A' licence standard at training centre Allahabad. On successful completion of the course the candidates are eligible for pilots' career in the operation of civil aircraft.

The combined air training course at Allahabad consists of 110 hours of flying on single engined aircraft, 60 hours of flying on double engined aircraft and 600 hours of ground instructions. The candidates will be required to pay Rs. 5000. Applications are received by the Director of Civil Aviation Training Centre, Allahabad.

2. Psychology

Those who have passed Intermediate and have been engaged as teachers may take a one year course at Lucknow University in preparation for their Diploma in Psychology.

3. Labour Welfare Training Course

The Govt. of Bombay School for Training of Labour Welfare Workers, Naigaum, Bombay 14, has a nine months course starting every July which leads to a Govt. diploma in the subject. Instruction includes both theory and practice. This course will be a qualification for those who desire to work with Government or Public Social Agencies, Mills and Factories, and Labour Organisations as welfare staff.

SCOPE

Labour Welfare Officers in large concerns like Burma Shell, Textile Mills, Standard Vacuum Oil Co., also Sub Regional Employment Officers; as Passenger Inspectresses, Railways; Welfare officers under Deputy Coal Commissioner; Labour Advisers to Trade Unions.

4. Tobacco Flue Curing

There is a two months course for Tobacco Flue Curing at Botanical substation, Pusa. Candidates may read the journal 'Indian Tobacco' for information on this field for careers.

5. Technical Training at Forest Research Institute, Dehra Dun.

Intermediates in science with some technical experience may work as apprentices in any special line in wood and timber technology at the above institute. Duration 3 to 6 months.

6. Certificate in Social Work

Two years course at The M. S. University, Baroda.

7. Diploma in Geology

Dhanbad School of Mines, Dhanbad—4 years—Diploma A. I. S. M. (Geo.)—Competitive Entrance Examination—Eligiblity Intermediate Mathematics, Physics and Chemistry (B.Sc. graduates in Geology are exempted from first year course on passing entrance examination).

8. Journalism

There is a diploma course of two years on Journalism at the Calcutta University.

9. Printing

Kalabhavan Institute, Baroda University—duration 4 years—Diploma—candidates must have passed Intermediate with drawing as subject.

10. Architecture

Kalabhavan Institute at Baroda has four years course leading to a diploma in the subject. Candidates must have passed Intermediate with drawing as subject. (See also notes on this subject in the Engineering section).

11. Teaching

Licentiate in Teaching –Calcutta University—One year.

12. Teaching of the Deaf

Training College for Teachers of the Deaf, Hewett Road, Lucknow—one year Diploma (T.D.)

13. Physical Education

Teacher training in Physical Education—one year—Andhra Physical Training College, Viziawada—leading to Higher grade Government certificate.

14. Laboratory Teaching

The All-India Institute of Hygiene and Public Health, Calcutta has a six month course for I.Sc. passed students on Laboratory Technic. The address of the Institute is 110, Chitranjan Avenue, Calcutta-12.

The King Institute, Guindy, has a three months course for diploma in laboratory science. For such positions like 'Milk Tester' this qualification is useful; others may be employed as laboratory assistants.

15. Librarianship

A brief three months course leading to a cetificate in Librarianship is offered by Madras Univertsity to Intermediate passed students. Course involves theoretical and practical training at the University Library of Madras University.

SCOPE

Librarians in Schools, in Madras Fisheries Subordinate Services, Secretariates, Legislatures,

16. Domestic Science Training

Those who have passed Intermediate with Chemistry can take up the Domestic Science training diploma at the Calcutta University. Teachers who have passed Intermediate but had not offered Chemistry as a subject may also be allowed to take the course provided they have been teachers for at least two years.

17. B.Sc. course in Human Anatomy and Embryology

Bombay University at Grant Medical College, and at Seth Sundardas Medical College, Bombay.

18. Mining

1. College of Mining and Metallurgy, Banaras—Degree—4 years.

2. Indian School of Mines, Dhanbad—Diploma course of fou-years leading to A.I.S.M.(Geol.)—Eligibility Intermediate with Mathematics, Physics and Chemistry. Admission by competitive examination of Intermediate standard.

Note:—For Madras Students the Central Polytechnic, Broadway, Madras is a Centre for entrance examination.

SCOPE

Geological Survey of India Department, Junior Inspector of Mines, Mines Department, Ministry of Labour, G.O.I.; as Superintendents of Salt: as special officers for mines and minerals.

Professional Institute:—Institute of Mining and Metallurgy Salisbury House, Finsbury Circus, London E.C. 2.

Documentary Film—G.O.I. 'Made from Mica' depicts mica-mining.

19. Metallurgy

1. College of Mining and Metallurgy, Banaras—Degree—4 years.
2. Bengal Engineering College, Sibpur—Degree—4 years.
3. Bombay University—B.Sc. (Engineering) in Metallurgy—3½ years.
4. College of Engineering, Poona—4 years.

SCOPE

Firms dealing in metals; The Technical Development Establishment Metallurgy, Ishapore and other Ordnance Factories at Katni and other places; Assistant Superintendents, Indian Ordnance Services.

As Junior field operators (Metals) Ministry of Commerce and Industry, Metallurgist; Indian Railways, Government Mints.

Junior Metallurgical Assistants, Railways.

20. Applied Physics

1. Jeypore Vikrama Deo College of Science and Technology, Andhra University—Degree—3 years.

SCOPE

(See under scope for Physics graduates).

21. Professional Society

Young Science students who have just started their academic studies are advised to enrich their College life by becoming the members of professional societies pertaining to their subjects. This will create a wider interest in their own subjects on an All-India plane. For example those who offer Botany, Zoology and Geology may join the Bombay Natural History Society at 114, Appollo St., Bombay. This Society has been promoting the profession and the science for over 65 years. The undergraduate science students in physics and chemistry may join the Indian Association for Cultivation of Science, 210, Bow Bazaar St., Calcutta. An early association with such professional institutes will go a long way in giving a fuller understanding and interest in their own subjects.

22. Social Service

(1) Students can attend every Summer a short course organised by the Madras Social Service League on Rural and Social Service subjects. There will be an examination at the end of the course and the certificate will be issued to successful candidates.

(2) After Intermediate a B. A. degree in Sociology could be taken at Bombay University.

23. Diploma in Russian

Delhi University offers two years diploma and one year certificate course in Russian.

24. Diploma in French and German

Diploma in foreign languages is an useful additional qualification. There are two years diploma course at the Madras University and Banaras Hindu University and Osmania University. There is a one year certificate course at Madras University.

SCOPE

Useful for research, for study in foreign countries; careers such as translator interpreters of the Ministry of External Affairs. The Armed Forces; An elementary knowledge of foreign languages is useful to obtain scholarships abroad.

24·1 *Diploma in Turkish* :—Osmania University

25. Diploma in Italian

Two years course at Banaras University.

26. College Scholarships

Many colleges offer scholarships for deserving students to take college courses. The Provincial Governments also offer scholarships through the heads of colleges to students pursuing college courses. Candidates should apply to principals of colleges.

27. Scholarships for Harijans, Backward Communities and tribes

Harijans and backward communities and tribes are also annually granted scholarships for college studies by the Government of India to whom they should apply. The address is : Scholarships Division, Government of India, Education Ministry. Interested Candidates may read the G.O.I. Education Ministry Publication "Scholarships for Backward Classes" a 1952 Publication—Number 125.

28. Indology

Honours course of three years—Mysore University—Maharaja's College, Mysore.

29. B.Sc. and B.A. Degree (Three years)

Both Travancore aud Delhi University have three years course for B.A. after passing an entrance or previous examination .

30. Diploma in Shorthand and Typewriting

2 years—Travancore University.

STAGE III

CHAPTER—I

PUBLIC EXAMINATIONS FOR SERVICES

CONTENTS

1. The Central Competitive Examinations.
2. Provincial Competitive Examinations.
3. Superior Forest Service Examinations.
4. Survey of India Examinations.
5. Madras Civil Service Examinations.
6. Madras Civil Subordinate Service Examinations.
7. Bombay State Transport Superior Service Examinations.
8. Examinations for recruitment of D. S. P.
9. Traffic Apprentices Competitive Examinations—Railways.
10. B. P. S. C. Examination for Supervisors of Books.
11. B. P. S. C. Examination for Translators.
12. Competitive examination held by Accountant General's Office.

1. The Central Competitive Examinations.

There is a competitive examination for recruitment to :

1. The Indian Administrative Service.
2. The Indian Audit and Accounts Service.
3. The Indian Foreign Service.
4. The Indian Police Service.
5. The Indian Railway Accounts Service.
6. The Indian Customs and Excise Service.
7. The Income Tax Officers.
8. The Transportation (Traffic) and Commercial Departments of Superior Revenue Establishment of Indian Railways.
9. The Indian Postal Service (Class I).
10. Central Secretariat Service Grade III.
11. Indian Defence Accounts Service.
12. Military Lands and Cantonments Service.

Candidates must address the Secretary, Union Public Service Commission, Post Office Box No. 186, New Delhi, for copies of application and other forms and papers connected with the examination.

Age limits for the appearance for all services except Police Service 21—24.

For Police Service age limits 20—24.

Consolidated regulations, examiners reports and back numbers of examination papers can be had from the Manager of Government Publications, Civil Lines, New Delhi.

Note :—Gauhati University has a special department for coaching students for this examination. Also there are coaching institutions like K. S. Aiyar's Tutorial College, Madras-14 which prepare candidates for this examination.

2. PROVINCIAL COMPETITIVE EXAMINATIONS.

Deputy Collectors

Competitive examinations for selection to the service of Deputy Collectors are held by the Provincial Public Service Commission. Qualifications for entry are B.A., B.Sc., B.Com., B.O.L., B.Sc. (Agriculture) degrees. Age limit—24.

Madras Civil Service, Madras Co-operative Service and Madras Registration Service:

Competitive examinations of these are open to graduates; age under 24 for Madras Civil Service, and under 25 for others.

Detailed particulars of these examinations and conditions of entry can be had from the Madras Public Service Commission, Madras 2.

Note :—Previous sets of question papers for M. P. S. C. Examinations ean be referred to at the Connemara Library, Madras.

3. Competitive Examination for recruitment to training and service in the Provincial Superior Forest service—Madya Pradesh.

Age 19-25, Qualifications a Bachelors or Master's degree in Natural Science, Mathematics, or Agriculture 1st or 2nd class. Subject for examinations: General Knowledge, Essay in English. Mathematics (Intermediate standard) and any two papers out of the following: Botany, Zoology, Mathematics, Chemistry and Physics. There is also an interview for selection. Physical requirements—Height 5′ 4″ chest 31″ expansion to 33″. Must pass a walking test of 16 miles in four hours.

4. Survey of India

The Government of India recruits by competitive examination for class II services of the Survey of India Department, Age :—19-24; for Harijans upper limit is 27 and for Government servants in the same department it is 28.

Qualifications :—B.A. or B.Sc. of approved Indian Universities with Mathematics.

Or (2) have passed A and B sections of the Institute of Engineers (India) examinations.

or

(3) an engineering degree of an approved university.

or

(4) Certificate of Dhanbad School of Mines.

or

(5) B.Sc. (Mining) of Banaras Hindu University.

or

(6) B.Sc. (Engineering) of Aligarh University.

or

(7) Diploma of Faraday House, London.

or

(8) Associateship of City and Guilds Institute in Civil Engineering.

or

(9) Associateship examination of Bengal Engineering College.

The Examinations will be on English, Mathematics and Drawing. Candidates should apply to the U.P.S.C., New Delhi for detailed particulars after announcements are made in the Press. (For full particulars, rules and regulations and forms of applications candidates must apply to the U.P.S.C., New Delhi after due announcements are made in the Press).

5—(a) The Madras Public Service Commission holds a competitive examination for recruitment to the Madras Civil Service, Madras Commercial Taxes Service, and Madras Co-operative Service Grade I. There will be a written examination followed by an interview and record. The subjects will be honours standard and they consist of:

1. Compulsory subjects
   (a) English Composition.
   (b) General Knowledge.
2. Optional subjects (5 subjects).
3. Interview and record.

The following are the qualifications :—

1. Madras Civil Service Deputy Collector :—
   B.A., B.Com., B.Sc., B.O.L., Barrister-at-Law.

2. Madras Commercial Taxes Service—Commercial Tax Officer. Age under 23 for non-Law graduates and under 25 for Law graduates. B.A., B.Com., B.Sc., B.O.L., B.L.

3. Madras Co-operative Service—Deputy Registrar of Co-operative Societies.

Age under 25, B.Com., B.A. in Economics, Mathematics or B.Sc. (Agriculture), B.A. Pass or Honours in Statistics, preference would be given to Commerce graduates.

Note :—For details regarding the age limits for special class of candidates like Harijans or and others candidates must contact the Madras Public Service Commission, Madras.

(b) The Madras Publice Service Commission holds a competitive examination for recruitment to the Madras Co-operative Subordinate Service; The Madras Local Fund Audit Subordinate service; The Madras Registration Subordinate Service; The Madras Secretariat Service; The Madras Ministerial Service (Probationary Revenue Inspectors, Audit clerks). These are group II services.

The competitive examinations will comprise of a written test as well as an oral test in the shape of an interview in which the previous record of the candidate will also be taken into account.

The subjects of the examination are:

1. Compulsory subjects. English Composition and General Knowledge.
2. Optional subjects.
3. Interview and record.

Five optional subjects must be taken one from group A and four from group B. B.A. (pass) Standard, language, literature and history of the country so far as it affects the growth and development of the language and literature. 1. English, 2. Sanskrit, 3. Persian, 4. Arabic, 5. Tamil, 6. Telugu, 7. Malayalam, 8. Urdu, 9. Kannada.

'B'

1. English Constitutional History.
2. History of Europe.
3. Economics.
4. Political Science.
5. Logic.
6. Psychology.
7. Ethics.
8. Mathematics (Pure).
9. Mathematics (Applied).
10. Statistics.
11. Anthropology with special reference to India.
12. Public Administration.
13. History of Administration in India and Machinery of Government.

14. Physics.
15. Chemistry.
16. Botany.
17. Geology.
18. Physiology.
19. Zoology.
20. Biology.
21. Agriculture.
22. Agricultural Chemistry.
23. Agricultural Botany.
24. Accountancy and Audit.
25. Banking and Mercantile Law.
26. Jurisprudence (B. L. Standard).
27. Indian Constitutional Law (B.L. Standard).
28. Geography.

The following are the qualifications of:

1. Co-operative Sub-Registrar: Age under 25 years;
B.A., B.Sc., B.Com., B.O.L., R.A. and B.L.

2. Junior Inspector;
Age under 26; B.A., B.Sc., B.Com., B.O.L., B.L., B.Sc. (Ag.)

3. Madras Local Fund Audit Subordinate Service:
Age under 22: B.A., B.Sc., B.Com., B.O.L., B.L.

4. Madras Registration Subordinate Service:
Age: 20-25: B.A., B.Sc., B.Com., B.O.L., B.L. B.Sc. (Ag.)

Also the candidate must have taken in the S.S.L.C. either Tamil or Telugu or Malayalam.

5. Madras Secretariat Service:
Age under 25: B.A., B.Sc., B.Com., B.O.L., B.L.

6. Madras Ministerial Service:
Probationary Revenue Inspectors:
Age: 23 for non-graduates in Law.
Age under 25 for graduates in Law.

Note :—There may be age concessions and lower qualifications for Harijans and backward classes. Candidate should write to the Public Service Commission for detailed particulars. The Madras Public Service Commission draws up a list of approved candidates for appointments as Audit Clerks in the Local Fund Audit Department in the Madras Ministerial Service. The competitive selection is by means of oral test and interview. Candidates may apply to M.P.S.C. when advertisments are made for full particulars.

7. Bombay State Transport recruitment–superior services

Selection for Junior officers in the above service are made by competitive examinations and viva voce. Age 19-24.

Administration and Transportation: General graduates. Mechanical Engineering :—Graduates or diploma holders in Mechanical Engineering or Diploma of recognised Institute. Accounts and Statistics :—Graduates in Commerce, Mathematics, Statistics or Economics.

Applicants should apply to the Secretary, State Transport Services Board, Worli, Bombay-18.

Successful candidates will be given a training before being assigned to departments.

8. Deputy Superintendents of Police

The M.P.S.C. holds a competitive examination of honours standard for recruitment in the Police Service. Graduates between 21-24 can enter this competition. There are also physical standards generally as follows 5′ 5″ height, chest 34″ expansion 2″ minimum. Candidates should apply: M.P.S.C., Madras-6. after due announcements are made in the Press.

M.P.S.C. Competitive Examinations are held for :—

(1) Madras Registration Service—District Registrar.

Age :—under 25. B.A., B.Sc., B. Com., B.O.L. and B.Sc. (Ag.), B.L.

(2) Madras Survey and Land Records Service :—Assistant. Director of Survey and Land Records. Age under 23. B.A., B.Sc., B. Com., B.O.L., B.L., and B.Sc. (Ag.)

(3) Madras Fire Service :—District Fire Officer. Age : under 21. B.A., B.Sc., B. Com., B.O.L., B.L., and B. Sc., (Ag.).

9. Railway Service

For Traffic Apprentices competitive examination for recruitment as Sectional Controllers, Assistant Inspectors and Yard and Station Staff, 20-24 Age.

Apply Secretary, Railway Service Commission, Churchgate, Bombay-1, when advertisements occur.

10. The Bombay Public Service Commission

Holds an examination for appointment as supervisor in the English branch of the office of the Examiner of Books and Publications, Bombay. Candidates must be M.A. in English and be under 35 years of age. Apply B. P. S. C., Bank of India Building, Bombay-1, when advertisements occur.

11. The Bombay Public Service Commission

Holds a competitive examination for selection of translators to the Legal Translation Bureau of State.

12. Recruitment for Divisional Accountants

There is a competitive examination held by the Accountant General, Madras for posts of Divisional Accountants.

Note:—There are institutions which offer coaching for all the above Competitive Examinations, like K. S. Aiyar's Tutorial College, Madras-14.

STAGE III

CHAPTER—II

TRAINING SCHEMES

CONTENTS

1. Ordnance Factory—Assistant Works Managers.
2. Agriculture Training.
3. Lever Brothers (India) Limited—Training.
4. Librarianship Training (Government).
5. Indian Oxygen and Acetylene Company Limited—Training.
6. Training in the Workshops in U. K. and Note on Practical Training Abroad.
7. Training Scheme for Engineers.
8. Diesel Engine Training.
9. Locomotive Engineering Training.
10. Metropolitan Vickers Company—Training.
11. The Brush Aboe Technical Training.
12. Training Scheme for Engineers (Electricity).
13. Training in Automatic Telephone, U. K.
14. Subordinate Audit Service—Apprentices.
15. Technical Apprentice at Forest Research Institute.
16. Damodar Valley Corporation—Training.
17. Tractor Training at Ferguson (India) Limited.
18. Training at Tata Iron and Steel Company, Limited.
19. Training by Government of India Films Division.
20. Short Service Regular Commission in the Army—Technical Arms.
21. International Labour Office Technical Assistance Project—Training.

1. Ordnance Factory—Assistant Works Manager—training

The Assistant Works Manager training scheme is for the training of candidates with Engineering degrees who are below 25 years of age and who are recruited through the Union Public Service Commission. This class of officers are to fill the higher managerial appointments in the Ordnance Factories Organisation. The scope of the scheme is to impart to these trainees under expert engineers and administrators, the advanced science of their trade as applied to armaments production, factory management, administration and labour control. The normal training period is three years and it can be varied according to competency. Trainees receive pay and allowances. Candidates should Apply to U.P.S.C., New Delhi.

2. Agriculture Training

The Department of Agriculture, Mysore has a training scheme for Agriculture extension work training-cum-development project at Visveswarayya Canal Farm, Mandya, Mysore State. Applicants must have had Agricultural Education. Training lasts six months.

3. Lever Brothers (India) Limited Management training schemes

Lever Brothers and Unilever and Company who have extensive and established business in India have a management training scheme for young and intelligent graduates. Among other qualifications required are (1) A very high order of intelligence (2) A personality which wins respect and popularity (3) The necessary physical and mental energy to render his work effective and efficient. General age limits are 21-25. Unmarried candidates are preferred in the interests of trainees' mobility during training. The training includes an overseas training for six months. Candidates should address the Personnel Manager, Lever Brothers, Scindia House, Ballard Estate, Bombay.

4. The Education Department-Government of Madras

Selects deputationists for training in Librarianship; B.A. or B. Sc. graduates under 25 are eligible to apply. Stipends will be paid during training. For full particulars candidates should address the Special Officer for Libraries, Office of the Director of Public Instruction, Madras-6.

5. Sales Apprentice Recruitment Scheme of the Indian Oxygen and Acetylene Company, Limited.

Approximately ten candidates will be selected for training in Calcutta for one year during which time they will receive theoretical and practical tuition in gas welding, hand and machine cutting, other gas processes and electric arc welding.

The minimum qulifications for candidates are :—

1. Degree in Science from a recognised University.

or

2. A degree in Engineering from a recognised University.
3. A diploma in Engineering from a recognised University.

Preference would be given to those who have workshop experience. Candidates must be of sound physique and below 25 years of age. After both a preliminary and a final interview the candidates would pay a premium which will be returned to them during training. On successful completion of training the candidatas will be employed on the staff of the company.

6. Training in the Workshops in U.K

(a) The engineering graduates who wish to have practical training in industries in U.K. can do so by contacting the representative of British firms in India. Training is also obtained under the auspices of the Ministry of Industries and Commerce, New Delhi. Those who wish to contact individual British firms could obtain the names and addresses of British Industries from Rylands or any other Directory.

(b) *Note on Practical Training Abroad*

Application in the prescribed form together with four copies of the following documents may be sent to the Ministry of Commerce and Industry, Government of India.

1. University Syllabuses or Courses covered for degree or diploma.
2. Passport size photograph.
3. Certificate of medical fitness, with attested copies.
4. Attested certificate of age.
5. Attested copies of degree certificates.

6. Attested copies of two testimonials from the Universities, Institution/Firm last attended, giving details from which it may be possible to judge the merit of the student and the ground covered by him in his subjects of previous study/ practical training with particular reference to the subject or subjects which the student wishes to take up for practical training abroad.

7. Detailed marksheets of all thc examinations passed from the Matriculation upwards (attested copies).

2. It may be noted that although efforts will be made to secure an offer for the practical training desired, from suitable firm at as early a date as possible, it must be distinctly understood that the receipt of the application in this Ministry implies no guarantee that the desired facilities will actually be obtained. Moreover, owing to the limited number of vacancies available for practical training, it is often necessary to approach and negotiate with a large number of firms and hence a long period may sometimes elapse before a suitable offer is obtained. This Ministry will not be responsible for any delay which may occur. It may be pointed out that in order to avoid duplication and confusion, it is necessary that this Ministry is informed whether any direct application has already been made to the institution or firm abroad, in which practical training is desired. If so, copies of the correspondence in this respect may be supplied to this Ministry. The name of the institution or firm with which it is desired to communicate direct may please also be communicated to this Ministry.

3. It may be clearly understood that the training facilities desired, if available, will be obtained on the distinct understanding that the candidate will bear his own expenses in connection with the training abroad, including passages and subsistance.

7. Training Scheme

The scheme of practical training in electrical installation in collaboration with the central electricity commission includes arrangements being made for providing training facilities in the Posts and Telegraphs Department. The following Bombay firms have also made provision for training facilities for Indian students:

Messrs. Pashabhai Patel & Co., Ltd.
„ Richardson & Cruddas Ltd.
„ Ford Motors Co., Ltd.
„ General Motors.

8. Diesel Engines

The following are some of the Danish and Belgian firms which manufacture Diesel Engines which may be contacted for information regarding practical training :—

Herman Svendson, Vester Voldgade, 14, Copenghagen V.
S. A. John Cockerill, Serding, Belgium.
Industir Eksport, Selskabet Balticum, Copenhagen V.
Anglo Belgian Co., 39, Grand, Belgium.

9. Locomotive Engineering

The Director, British Locomotive Manufactures's Association of Great Britain arranges for practical training in Locomotive Engineering in four leading firms in U. K. Candidates must be graduates in mechanical engineering and must have two to three years practical experience with railways in India. Their cases must be recommended by the Railway authorities. Duration of the training is from a period of one year to a year and a half. There is no premium to pay for the training.

Locomotive Engineering Concerns in India are (1) Tata Locomotive and Engineering Co., Tatanagar, Bihar (2) Chittaranjan Locomotive Works, Bengal.

10. Metropolitan Vickers

The Metropolitan Vickers Electrical Company, U.K., accepts technically educated youngmen for a two year's training as college apprentices. Candidates must preferably have obtained an honours degree in engineering. Candidates should apply to the company for forms.

11. The Brush A.B.O.E. Technical Training

The Brush—A. B. O. E. (Loughborough, Leceistershire) factories has a scheme whereby engineering graduates from universities all over the Commonwealth will be able to join a scholar ship scheme that will provide a thorough engineering training at the groups own

factories. The curriculam allows for two years' study of the products and methods of production with specialised training. A free return passage from the apprentices' home to England will be allowed plus additional travelling expenses. Wages will be the same as those paid to other group apprentices at present working at group factories. Candidates should apply to the Company at Loughborough, Leceistershire, U.K.

12. Training Scheme for Engineers

The Central Elecricity Board of London have training schemes varying from six months to two years open for engineering graduates of this country. Address: General Manager, Central Electricity Board, Traffalgar Buildings, Charing Cross, London, S.W.A.

13. Training in Automatic Telephone in U.K.

A joint scheme of the five leading telephone manufacturers in U.K. offer a year's training at their factories for engineers from India. Address: Export Manager, Automatic Telephone and Electric Company Ltd., Norfolk House, London W.C. 2.

14. Subordinate Audit Service—Apprentices

Subordinate Audit Service apprentices in the Indian Audit Service. Applicants should be graduates with brilliant University career, Bachelors and Masters of Commerce and Chartered accountant may also apply. Preference will be given to candidates who have taken the I. A. S. examinations and who though unsuccessful have shown a high degree of proficiency and posses high Academic qualifications. Candidates should apply to the Comptroller and Auditor General of India, 3, Mansing Road, New Delhi after due advertisements have appeared in the papers and Government of India Gazette, Part III.

15. Technical Apprentice at Forest Research Institute, Dehra Dun

Graduates in Science, Chemistry, Engineering, can work as apprentices in all branches for training in composite wood, Timber Mechanics, Wood Preservation, and Paper Technology. Duration 3 to 6 months.

The following are the branches for Technical (Apprentice) Training:

(a) Composite Wood.
(b) Wood Anatomy.

(c) Wood Preservation.
(d) Timber Mechanics.
(e) Wood Working.
(f) Wood Seasoning.
(g) Cellulose and Paper.

16. Damodar Valley Corporation—Training

Anderson House, Alipore, Calcutta-27, has facilities for training to a limited extent for engineering graduates. The arrangements are done through the Regional Office, Ministry of Education, G.O.I., No. 5, Esplanade St., Calcutta.

17. Tractor Training Course at Harry Ferguson of India Ltd., Bangalore

Educational facilities at the above consist in the main, of an 8 weeks course divided into two parts—4 weeks service course, in which theory and practise of the Ferguson Tractor are taught, and students are trained to drive, correct minor faults, and completely overhaul and recondition the tractor. The remaining 4 weeks are spent on field work, touching the theory and practice of mechanised farming. During this time, all students are taught to plough, ridge, and the use of the 30 odd implements that are manufactured.

18. Tata Iron and Steel Company Training Scheme

Graduates in engineering or metallurgy under 24 years of age are taken as graduate apprentices at the Jamshedpur Technology Institute, Jamshedpur, where training is given for supervisory posts in the Tata Industries.

19. Training by Government of India Films Divisions

A brief course of training is offered by Government of India Films Division, Bombay in Sound Engineering, and Cinemotography to graduates in Physics with Diploma in Cinemotography.

A Course of training in direction is given for graduates in science or arts by the same organisation. Candidates may apply to the Chief Producer, Films Division, Governmcnt of India, 24, Peddar Road, Bombay-6.

20. Short Service Regular Commission in the Army—Technical Arms

The Army recruits civilian candidates for the grant of short service regular commission in the corps of Engineers, Signal, and electrical and Mechanical Engineering.

Duration of Commission:

Seven years extensible to ten years, if services are required. A certain number of these officers will have good prospects of being granted permanent regular commissions if as a result of their service, they come up to the standard laid down for such commissions. Age : Must be between 20 and 40 years on the date of application.

Minimum Educational Qualifications:

Candidates must possess one of the following qualifications :—

(a) Sections 'A' and 'B' of the Associate Membership Examination of the Institution of Engineers (India) or such other examination as is accepted by the Institution in exemption thereof.

(b) An engineering degree or a Marine Engineering degree or an Electrical and Mechanical Engineering degree.

(c) A degree in Applied Physics/Physics and Mathematics supplemented by a diploma of recognised Tele-communication Institute in Radio Engineering.

(d) First or Second Class Engineers Certificate of competency awarded by the Board of Trade.

(e) (i) Final passing out certificate 'IMNTS' DUFFERIN.

(ii) The Second Mates BOT ticket or a certificate of satisfactory completion of apprenticeship from a recognised Marine Engineering Works as required by B.O.T.

(f) A graduate IBE of the Institute of Electrical Engineers U.K. with Line or Radio Communication as one of the subjects in Section 'B'.

(g) A first class honours degree/honours degree in Physics or a first class degree in Physics or a M.Sc. degree in Physics/Applied Physics.

Note :—A first class degree in Physics of only that University will be accepted which does NOT run an honours course in its degree classes, and an honours degree of only that University will be accepted which does NOT award classes in its honours degree examination.

Medical Fitness:

Must be medically fit in all respects for service in any part of the world, i.e., in Medical Category 'A'.

Selection:

Candidates will be interviewed by a Services Selection Board. Reports/Certificates submitted on candidates by the head of institutions and/or employers will be taken into consideration. Those called for interview will receive Inter Class travelling allowance, both ways. Candidates interviewed previously for the same type of commission will travel at their own expense.

Grant of Commission.

Selected candidates will be granted commissions in the rank of 2 on successful completion of pre-commission training. Higher acting rank may be granted in special cases to officers in the Corps of Electrical and Mechanical Engineering.

For application forms and other particulars apply stating age and technical qualifications to:—

Army Headquarters, Adjutant General's Branch. Sp 2 (b), Dhq P.O. New Delhi-11.

21. The International Labour Office have a Technical Assistance project; an important phase of the work will be the training of selected personnel from the industries and plants concerned in the fundamentals of modern methods of work study and related procedures for improvement of efficiency and productivity and application of system of payment by results. Interested candidates may register with the office of the Chief Adviser, Factories, Ministry of Labour, Government of India.

22. The Indian Cable Company, Tatanagar, offers training for Engineering and Chemistry graduates. Candidates may apply to the Works Manager of the Company.

STAGE III

CHAPTER—III

TEACHING

CONTENTS

1. Colleges for Teacher's Training.
2. Physical Education Teacher Training.
3. Teacher Training for the Handicapped.
4. Diploma in Teaching (Languages).
5. Recruitment to Educational Corps, I.A.F.
6. Short Course for Teachers.
7. Social Education Organisations.

1. COLLEGES FOR TEACHER'S TRAINING AFFILIATED TO UNIVERSITIES.

Agra University.

Women's Training College, Dayalbagh, Agra, (for B. T.).
Christ Church College, Kanpur.

Aligarh University.

Department of Education, Muslim University, (for B. T. & M. Ed.) Aligarh.

Allahabad University.

Department of Education, Allahabad University, (for M. Ed.), Allahabad.

Andhra University.

St. Joseph's Training College for Women, Guntur, (for B. Ed.).
Government Training College, Rajahmundry, (for B. Ed.).

Banaras University.

Teachers' Training College, Banaras, (for B. Ed. & M. Ed.).

Baroda University.

Faculty of Education and Psychology, Baroda, (for B.T. & M. Ed.).

Bombay University.

Secondary Training College, Bombay, (for B.T. & M Ed.).

Calcutta University.

David Hare Training College, Calcutta, (for B.T.).

Loreto House, 7, Middleton Row, Calcutta, (for B·T. for women).

Scottish Church College, Calcutta, (for B.T. for women).

Teachers' Training Department, Calcutta University, Calcutta, (for B.T.).

Union Christian Training College, Berhampore, (for B.T.).

Delhi University.

Central Institution of Education, Delhi, (for B.T. & M. Ed.).

Gauhati University.

Department of Education, Gauhati University, Gauhati, (for M.A. in Education).

St. Edmund's College, Shillong, (attached classes for men).

St. Mary's College, Shillong. (attached classes for women).

Jammu and Kashmir University.

Teacher's Training College, Srinagar, (for B.T.).

Karnatak University.

Secondary Training College, Belgaum, (for B.T., & M. Ed.).

Lucknow University.

Education Department, Lucknow University, Lucknow, (for B. Ed. & L.T.).

Madras University.

Lady Willingdon Training College, Triplicane, Madras, (for B.T.).

Meston Training College, Royapettah, Madras, (for B.T., M.Ed.)

St. Christopher's Training College, Vepery, Madras, (for B.T. & M. Ed.).

Government Arts College, Coimbatore.
Sri Ramakrishna Mission Training College, Coimbatore.
Dr. Alagappa Chettiar Training College, Karaikudi.
Government College, Mangalore.
St. Xavier's College, Palamcottah.
Rajah's Training College, Kollengode.
Training College, Ottapalam.
St. Ann's Training College, Mangalore, (for B.T.).
Teacher's College, Saidapet, Madras (for B.T.).

Mysore University.

Teacher's Training College, Mysore, (for B.T.).

Nagpur University.

University Training College, Nagpur, (for B.T.).

Osmania University.

Teacher's Training College for Men, Hyderabad, (Deccan). (for B. Ed. & M. Ed.).

Teacher's Training College of Women, Hyderabad, (Deccan).

Patna University.

Patna Training College, Patna, (Dip. in Edu. & M. Ed.).

Poona University.

Tilak College of Education, Poona, (for B.T. & M. Ed.).

Shree Maharani Tara Bai Teacher's Training College, Shahpuri, Kolhapur, (for B.T.).

Nowrosjee Wadia College, Poona-1, (attached class for T.D.).

R. P. Gogate College, Ratanagiri, (attached class for T.D.).

Chattarpati Shivaji College, Sitara, (attached class for T.D.).

Punjab University.

Government Training College, Jullundur, (for B.T.).

Brajendra College, Faridkot, (for B.T.).

Government Training College for Women, Simla, (for B.T.).

Dev Samaj Training College for Women, Ferozepur City, for B.T.).

Rajputana University.

Government Teacher's Training College, Bikaner, (for T.T.L.).

Vidya Bhawan Govind Ram Sakseria, (for B. Ed.).

Teacher's Training College, Udaipur.

Saugor University.

Government Diploma Training Institute for Women, Amraoti.

Government Diploma Training Institute for Men, Amraoti.

Prantiya Shikshan Mahavidyalaya, Jubbulpore, (for M. Ed., B.T. Dip. T.).

Training Institute for Women, Hawa Bagh, Jubbulpore, (for Dip. T.)

Diploma Training Institute for Men, Khandwa, (for Dip. T.).

Travancore University.

H. H. the Maharaja's Training College, Trivandrum, (for B.T.)

Utkal University.

Radhanath Training College, Cuttack, (for D. Ed.).

TRAINING INSTITUTES NOT AFFILIATED TO UNIVERSITIES

Delhi.

(For J. A. V. Certificate of Education Department, Delhi).

Government Teachers' Training School, Qutab Road, Delhi.

Punjab.

(For J. A. V. Certificate of Education Department, Punjab).

Government Training College for Women, Simla, (Attached classes).

Dev Samaj Training College for Women, Ferozepore City, Attached classes)

Avalon Girls High School, Pathankot, U.P. (Attached classes).

(For L.T. & C.T. of Education Department of U.P. Government).

Government Training College for Women, Allahabad.

Government Training College for Women, Lucknow.

College for Home Science and Craft for Women, Lucknow.

Training College for Deaf, Lucknow.

Government Training College, Lucknow.

Government Training College, Agra.

Government Training College, Banaras.

Government Training College, Allahabad.

Balwant Rajput College, Agra.

Kishori Ram College, Mathura.

N.R.E.C. College, Khurja.

Dharam Samaj College, Aligarh.

Government Training College for Constructive subjects, Allahabad.

Government Training College, Bareilly. (for under-graduates)

St. Andrew's Teachers' Training College, Gorakhpur, (for under-graduates).

Christian College, Lucknow. (for under-graduates)

D. A. V. Training College, Lucknow, (for under-graduates).

Kanaya Kubja Training College, Lucknow. (for under-graduates)

Champa Agarwala College, Mathura, (for under-graduates).

A. C. College, Fatehpore. (for under-graduates)

Bengal.

Basic Training College for Men, Baigachi. (24, Parganas).

Basic Training College for Women, Alipore.

NORMAL AND TRAINING SCHOOLS.

Ajmer.

Government Teachers' Training Institute, Ajmer.
Normal School for Boys, Ajmer.
Christian Mission Training School, Beawar.

Bhopal.

Training School for Pr. Teachers, City High School, Bhopal.

Coorg.

Training Section, Central High School, Mercara.

Delhi.

Government Teachers' Training School, Qutab Road, Delhi.

Government Teachers' Training Institute for Women, Daryaganj, Delhi.

Teacher's Training Institute, Jamia Millia, Delhi.

Himachal Pradesh.

J. V. Training Class, Bijai High School, Mandi,
J. V. Training Class, M.K.M. Vidyalaya, Nahan.
Teacher's Training School, Nahan.

Kutch.

Teachers' Training School, Bhuj.

Madhya Pradesh.

Basic Normal School, Seoni.
Basic Normal School, Wardha.
Normal School, Bilaspur.
Urda Normal School, Khandwa.
Normal School, Amravati.
Normal School, Akola.
Normal School, Sagar.
Normal School, Balghat.
Normal School, Raipur.
Normal School, Betul.
Normal School, Hoshargabad.
Normal School, Buldana.
Normal School, Yeotmal.
Normal School, Khandawa.

Normal School for Women, Amravati.
Normal School for Women, Jabalpore.
Normal School for Women, Amravati.
Mission Normal School, Khandeva.
Aided Normal School, Sevasaran, Nagpur.
Aided Normal School, Moroshabagh, Nagpur.
Providence Mission Normal School, Nagpur.
Mission Training Institute, Hawabagh, Jabalpore.

Rajasthan.

Training and Normal School, Udaipur.
Training and Normal School, Kotah.
Kasturba Training Vidyalaya, Udaipur.

Vindhya Pradesh.

H. T. C. School, Chhatarpur.
Training School, Rewa.

SCOPE FOR TEACHERS.

Colleges, Schools, Military Wing of the National Defence Academy; Employment Exchange Staff Training School of Ministry of Labour; School Assistants Educational Subordinate Service, B.E.D. and M.Ed. qualifications are required for appointments as D.E.O.; as teacher in Military Colleges at Jullundar, Ajmer, Belgaum, Bangalore; as Education Officers, Community Projects; as Assistant Mistress, Anglo Indian Schools.

Careers.

1. Apart from regular schools, the Railway Service Commission recruits teachers for Railway Schools such as at Lallaguda, Dohad and other places.

2. Teachers are also taken as Asst. Film Librarians in the Madras Education Service. Apply Deputy Director of Public Instruction, Government of Madras.

Teachers are also taken as Social Education Organisers in the Community Projects.

1·1. School for Adult Education Teacher Training :

Chitral School for Adults, Annamalai University, Annamalai-nagar.

PROFESSIONAL INSTITUTE.

The College of Preceptors, 2 & 3, Bloomsbury Square, London.

2. Physical Education

Diploma in Physical Education Y. M. C. A. College, Saidapet.

SCOPE

Both for men and women as specialists in the provincial educational service.

3. Teacher Training for Handicapped

1. Lucknow School for Deaf and Dumb, Hewett Road, Lucknow—one year.
2. Calcutta School for Deaf and Dumb, 293, Upper Circular Road, Calcutta-9.
3. School for the children in need of special care, Ravi Lodge, Warren Road, Bombay—2 years.
4. Training Centre for Adult Blind, Rajpur Road, Dehra Dun.

4·1. Diploma of Teaching in Tamil

Annamalai University—one year—open for vidwan and other equivalent titles. The Teacher's College, Saidapet has a five months Pandits Training Course for Vidwan Title holders.

4·2. Diploma in Teaching of Sanskrit

Annamalai University—one year—open for Siromani and equivalent title holders.

5. The Indian Air Force

Recruits officers for permanent commissions in Education branch. Age 21-25.

M.Sc., M.A., B.E., 1st or 2nd class with a teaching certificate, diploma, degree or two years teaching experience; Additional qualifications like Diploma in Librarianship would be preferable. Desirable qualifications:— good in Sports, activities like Scouts, Training Corps.

Candidates must apply to:

1. No. 2, G.T.S. I.A.F., Tambaram.
2. Training Command (Unit), Infantry Road, High Grounds, Bangalore.

6. Intensive and Short Course

Of three months duration to enable students to appear for B.T. examination of Madras University is available at the Teachers' College, Saidapet, Madras. Candidates must be B. A. graduates, and must be bonafide teachers with required experience and a teachers' secondary grade certificate.

Useful Books.

The following are useful books for teachers :—

Government of India Publications, 'Teacher': 'Handbook of Social Education', 'The Single Teacher School', 'Vidya Bhavan Open Air School', 'The Training of Educational Administrators' 'Teacher Education in India' 'Physical Education in India', 'Directory of Educational and Allied Organisations in India' 'Humanistic Institutions and Societies in India' and 'Scientific Institutions and Societies in India.'

Documentary Films of Government of India in this connection are :—'Indian Olympic Games', 'Festival Time', 'Accent on Asia,' 'Profitable Pastimes' 'Community Singing' and 'Fitness First'. The information contained in these are useful for Physical Instructors in institutions.

The documentary 'Basic Education' explains practically the 'Gandhian scheme of rural education',

7. Social Education

Apart from schools, there are a number of organisations in India engaged in Social Education in which the Trained Teacher might find scope for varied work. A list of such organisations is given below :—

Assam Libraries Association ; The Assam Oil Company Schools ; The Janata Hitaishi Pushtakalaya, P. O., Bagar ; Social Education Centre, P. O., Balipur ; Ramakrishna Mission, Jamshedpur ; Bihar Radhaswami Satsang Association, Muzaffarpur ; Manbhum Seva Samiti, Purulia ; Durga Pustakalaya, Bairagaria ; Shree Shankar Pustakalaya, P. O., Kakna Champaran ; Gandi Naisu Pustakalaya, More-Patna ; Bombay Presidency Adult Education Association, Fort, Bombay ; Bombay Presidency Women's Council, Town Hall, Fort, Bombay ; Adi Andhra Social Service Association, 94-A, Tank Road, Bombay ; Maharashtra Vidya Mandir, Noviwadi, Bombay ; The

Uttar Bharatiya Mazdoor Sangh, Parel, Bombay; The Congress Sevika Dal, Bombay; The Adult Education League, Tilak Road, Poona; The Shikshan Prasarak Mandal, Indrapura; The Malegaon Samaj Shikshan Mandal, Nasik; The Azad Hind Seva Sangh, Gradag Betgin; Lok Seva Samiti, Dharwar; Moral Social Education Samiti, Morab; Medleri Social Education Samiti, Medleri; Saidapur Loka Seva Samiti, Saidapur; Niraxarata Nimulana Samiti, Mattighathi; Bolegaon Samaj, Seva Samiti, Bolegaon : Loka Seva Samiti, Belgaum; Nagpur Social Education Association, Nagpur; Pratibha Mandal, Nagpur; Modern Education Society, Nagpur; Hislop College Social Service Society, Nagpur; Guild of Service, Nellore; Social Service League, Cuddapah; The South Indian Adult Education Association, All India Women's Conference, Simla; Balwant Rajput Social Service League, Uttar Pradesh.

Adult Education

For benefit of those Teachers and Social Workers who wish to be authors of books for adults the Government of India have brought-out a small booklet "Writing Books for Adults" which is in the nature of a guidance phamplet for such persons.

Scholarships

(1) The Institute of Education, London offer generally a fellowship for experienced teachers for study at London for a duration of one year. Candidates may apply through their respective Universities after due announcements are made.

(2) The British Council Scholarships—Generally for lecturers in English for study in U. K.

Travel Grants

The British Council offers travel grants to University Teachers or distinguished Scholars and Scientists invited by Universities in U. K. for short visits.

STAGE III

CHAPTER—IV

FURTHER STUDIES FOR GRADUATES IN SCIENCE, (B. Sc.)

CONTENTS

1. Sugar Technology.
2. Chemical Engineering.
3. Chemical Technology.
4. Pharmaceutics.
5. Applied Chemistry.
6. Soap Technology.
7. Oil Technology.
8. Leather Technology.
9. Textile Technology.
10. Foods and Drugs.
11. Plastics, Paints and Varnishes.
12. Chemical Technology of Intermediates and Dyes.
13. Jute Technology.
14. Bacteriology.
15. Aeronautical Engineering.
16. Electronics.
17. Instrument Technology.
18. Automobile Engineering.
19. Mathematical Physics.
20. Applied Physics.
21. Microscopy and Chemistry of Foods, Drugs and Water.
22. Calcutta University M. Sc. in Chemical Subjects.
23. Geophysics.
24. Ceramic Technology.
25. Glass Technology.
26. Pharmacy.
27. Analytical Chemistry.
28. Soap Technology.
29. Fruit Technology.
30. M. Sc. (Industrial Chemistry).
31. Royal Institute of Chemistry.
32. Other Professional Institutes.
33. Christs College Studentship.
34. Laboratory Trainees.

TECHNICAL EDUCATION FOR GRADUATES AFTER B. Sc.

1. Sugar Technology

The following are the Institutes :—

1. Associateship course at the Institute of Sugar Technology, Kanpur, 3 years.

2. Andhra University B.Sc. (Honours) Technology with Sugar as special subject.

Note:—The U. P. Cane Development Department offers cash prize for best essay on the subject.

Employment in Sugar Industry like at Nellikuppam, Samalkot, Vyur, Pithapuram, Aetekuppaka, Ankapali, Bobbili, Sitanagar, Hospet.

2. Chemical Engineering

The following are the Institutes :—

1. A. C. College of Technology—Degree B.Sc. (Technology)—2 years.

2. Department of Chemical Technology, Bombay University—B. Sc. (Technology)—2 years.

3. Lakshminarayan Institute of Technology, Nagpur—Degree—2 years.

SCOPE

Factories: Silver Refining Institute at Alipore, (Ministry of Finance).

Aeronautical Inspection Service; Officers in the I.A.F.

3. Chemical Technology

The following are the Institutes :—

1. College of Technology, Banaras, Post—graduate degree—2 years in Industrial Chemistry—minimum qualification B. Sc. (Industrial Chemistry).

Biochemical Engineer, Government Penicillin Factory, Pimpri.

4. Pharmaceutics

The following are the Institutes :—

1. College of Technology, Banaras—Degree—2 years—Minimum Qualifications B. (Pharmaceutics).

Bombay University Deparment of Chemical Technology—Degree—2 years. An important industry in India in this connection is Alembic Chemicals Limited.

5. Applied Chemistry

The following is the Institution :—

Department of Applied Chemistry, University College of Science and Technology, Calcutta University—2 years.

6. Soap Technology

The following are the Institutes —

1. University College of Science and Technology, Calcutta—Diploma—one year.

2. Banaras Hindu University—Diploma—2 years.

7. Oil Technology

The following are the Institutes :—

1. The Lakshminarayan Institute of Technology, Nagpur—Degree—2 years.

2. Bombay University Department of Technology—Degree—2 years.

SCOPE

Inspectors, Office of Vegetable Oil Products Controller, G.O.I.

8. Leather Technology

The following is the Institute :—

A. C. College of Technology, Guindy—Degree—2½ years.

SCOPE

Madras Provincial Industries Service.

9. Textile Technology

The following are the Institutes :—

1. A. C. College of Technology, Guindy—Degree—2 years.

2. Bombay University Department of Chemical Technology—2 years—Degree in Textile Chemistry.

SCOPE

Mills, Textile Commissioner's Offices, Bombay, Madras ; Assistant Inspectors, Textiles Inspection Wing, Director General of Industries and Supplies ; Provincial Industries Service.

10. Foods and Drugs

The following are the Institutes :—

1. Bombay University Department of Chemical Technology—Degree—2 years.

2. Jeypore Vikramdeo College of Science and Technology, Waltair—Degree—2 years.

SCOPE

Assistants to Government Chemical Examiners.

11. Plastics, Paints and Varnishes

The following is the Institute :—

Bombay University Department of Chemical Technology—Degree—2 years.

SCOPE

Factories, as appraisers in customs departments.

12. Chemical Technology of Intermediates and Dyes

The following is the Institute :—

Bombay University Department of Chemical Technology—Degree—2 years.

13. Jute Technology

The Institute of Jute Industry, 35, Ballygunge, (Circular Road), Calcutta, annually trains about 25 science graduates in this important branch of India's Industry.

14. Bacteriology

There is a three month course on this subject at the King Institute, Guindy, Madras.

Apprentices

The Sindri Fertiliser Factory take Science graduates for apprenticeship at their factory.

15. Aeronautical Engineering

There is a three years course at the Madras Institute of Technology.

16. Electronics

There is a three year course on this subject at the Madras Institute of Technology.

17. Instrument Technology

There is a three year course on this subject at the Madras Institute of Technology.

18. Automobile Engineering

There is a three year course on this subject at the Madras Institute of Technology.

19. Master of Science in Mathematical Physics

Andhra University has a one year course for B.Sc. (Honours) Mathematics or Physics graduates in the above subject.

20. Master of Science in Applied Physics

Andhra University has a one year course for B.Sc. (Honours) Mathematics or Physics graduates in the above subject.

SCOPE

As J. S. O.'s in Fuels at Technical Establishment Labs at Kanpur.

21. Master of Science in Chemistry with special subject Chemistry (including Microscopy) of Foods, Drugs, and Water

Andhra University has a course on the above subject for which B.Sc. (Honours) Chemistry or B.Sc. (pass) Chemistry main graduates are eligible. The duration is one year and two years respectively. Professional Institute in this connection is the Institution of Water Engineers, Parliament Mansions, Abbey Orchard St., London, S. W. 1.

22. Calcutta University Council of Post-graduate teaching in Arts and Science

Has an M.Sc., course in Applied Chemistry which includes compulsory papers of Chemical Technology, Chemical Engineering and a special subject from :

1. Applied Bio-chemistry.
2. Oil Technology (Oils, Fats and Soaps).
3. Silicate Industries (Cermics, Glass and Enamels etc.).
4. Pharmaceutical Chemistry.
5. Colour Chemistry and Dyeing.
6. Tanning.
7. Pigments, Paints and Varnishes.

This is a 3 years course open for B.Sc. (Hons.) graduates in Chemistry main, Mathematics, Physics subsidiaries.

SCOPE

B.Sc. (Technology) of Madras University and M.Sc., in Chemistry Technology of Andhra University are suitable qualifications for posts like Inspector of Factories. Technology graduates are suitable for posts of Assistant Chiefs (Industry) of Planning Commission.

23. M.Sc. Geophysics

1. Andhra University in Meteorology and Oceanography—candidates for admission must have passed B.Sc. Physics main or Honours in Physics, Mathematical Physics or Geology. Duration one year.

2. Banaras University—Two years course. Open for B.Sc. graduates.

3. Two years course at the Indian Institute of Technology, Kharagpur—open for degree holders in Geology, Geophysics and Soil Mechanics.

24. Ceramic Technology

M.Sc. course—one year—Banaras University open for graduates in Ceramic Technology—Research.

25. Glass Technology

M.Sc. course—one year—open for graduates in Glass Technology—Banares University.

26. Pharmacy

M. Pharm—one year—thesis and research-Banaras University open for pharmacy graduates.

27. Analytical Chemistry

Diploma—1 year—Madras University—open for B.Sc. (Chemistry) graduates.

28. Soap Technology at Kerala Soap Institute, Kozhikode

Candidates who are graduates in science or have some knowledge in soap making are admitted for a short course of training of three months duration commencing in July, October and January each year. The course will be of practical nature and will comprise the manufacture of soaps by usual process: cold, semiboiled, boiled. The fees are Rs. 75/-. On successful completion a certificate will be issued.

There is a diploma course in soap manufacture at Banares University. Duration : one year.

29. Fruit Technology

Diploma course at Central Food Technological Research Centre, Cheluvamba Mansion, Mysore. B.Sc. Chemistry or Agriculture: duration 15 months—The course gives training in theory and practice in fruit and vegetable preservation.

SCOPE

Development officers, fruit products, Fruit specialists, Provincial Agricultural Service (Banana Research Station, Aduthurai, Coonoor Fruit Station) Demonstrators in fruit preservation (Provincial service).

30. M.Sc. (Industrial Chemistry)

At Banaras University open for graduates in Industrial Chemistry, optionals : Oils and soaps, protective coatings, carbohydrate industtries, dye intermediates, fine organic chemicals and inorganic chemicals Duration : 2 years after B.Sc. (Industrial Chemistry) or 1 year after M.Sc. Chemistry.

31. The Royal Institute of Chemistry

The Royal Institute of Chemistry is the professional organisation for examination and registration of those persons competent to practise as Chemists.

Candidates for Associateship of the Institute must first pass a Preliminary Examination in general education such as the School Certificate or Matriculation Examination, and then apply for registration as students. They must be recommended for registration by a Fellow of the Institute or produce evidence that they are undergoing an approved course of training.

Admission to the Associateship Examination is granted to those applicants who have passed an approved Preliminary Examination and have completed either a four years' full-time course in prescribed subjects at an Institution recognised by the Council or have compiled with certain alternative conditions. Exemptions are granted in specified cases to graduates and to those candidates of good general education who have been practising as Chemists in responsible positions for a number of years.

Applications for admission to Associateship from overseas applicants are granted individual consideration.

Full details of the Regulations may be obtained from:

The Registrar,
The Royal Institute of Chemistry,
30, Russell Square, London W.C. 1.

Local Centre

Honorary Secretary, Royal Institute of Chemistry (Madras Centre), 3, Jagadiswar St., Madras-17.

There are centres of Examinations in India like at Bombay, question papers set by the institute are regularly published in the Institutes Publication "Journal of the Royal Institute of Chemistry" copies of which extending over several years are available in the Madras University Library or Connemara Library and with the Honorary Secretary (Madras Centre).

Note :—Associate Membership of this Institute is often considered equivalent to an M.Sc. degree in Chemistry.

32. The other Professional Institutes

1. The Chemical Society, Piccadilly, London, W.1.
2. The Society Chemical Industry, 56, Victoria St., London S.W. 1.

33. Christ College, Cambridge

Offer a research scholarship open to Indian graduates. Particulars can be had from that University's handbook.

34. Railways

The Southern Railways and other state railways take laboratory trainees and give them 3 years training after which the candidates would be taken in the Railway service as Laboratory assistants.

35. Diploma in Agriculture

At Travancore University;—2 years open for B.Sc. graduates with Chemistry or Botany or Zoology.

36. M.Sc. Statistics

Two years—open to B.Sc. with Mathematics—Travancore University.

STAGE III

CHAPTER—V

FURTHER STUDIES AND SCOPE FOR HONOURS GRADUATES IN SCIENCE—B. Sc. (HONS.) or M. Sc.

CONTENTS

1. Aeronautical Engineering.
2. Metallurgy.
3. Chemical Technology.
4. Chemical Engineering.
5. Corps of Electrical and Mechanical Engineers.
6. Short Service Commision in the Technical Arms.
7. Sugar Technology.
8. Pharmaceuticals.
9. Communication Engineering.
10. Power Engineering.
11. Forestry.
12. Extension Course in Forest Botany.
13. Scope for M. Sc. Chemistry Graduates.
14. Scope for B. Sc. Technology or M. Sc. Technology Chemistry.
15. Scope for Chemical Engineers.
16. List of some important Chemical Industries in India.
17. Scope for M. Sc. Botany Graduates.
18. Scope for M. Sc. Physics Graduates.
19. Scope for M. Sc. or M.A. Mathematics Graduates.
20. General (English, Commerce or Law).
21. Scope for M. Sc. Zoology Graduates.
22. Scope for M. Sc. Geology Graduates.

B. Sc. (Honours)

1. Aeronautical Engineering

The Indian Institute of Science, Bangalore, has an associateship course of 2½ years duration for B. Sc. (Honours). Physics Graduates.

SCOPE

Aircraft examiners in Civil Aviation Department; Aerodrome Officers.

2. Metallurgy

The Indian Institute of Science, Bangalore, has a three years advanced diploma course for B. Sc. (Honours) Graduates.

3. Chemical Technology

The Indian Institute of Science offers a 2½ years (five terms) course in branches of Applied Chemistry for B. Sc. (Honours) Graduates.

4. Chemical Engineering

The Indian Institute of Science offers Diploma in this subject of three years duration for B. Sc. (Honours) Graduates.

5. Corps of Electrical and Technical Engineers

A first class honours degree in physics, an honours degree in physics or a first class degree of a recognised University with physics as one of the subjects preferably with basic studies in Radar, or M. Sc. in physics or applied physics preferably with basic studies in Radar is eligible to apply for the Technical Graduates course of the Armed Forces for entry into the Corps of Electrical and Mechanical Engineers. Age limit 20–27. Apply Directorate of Personnel, Army Head-quarters, New Delhi.

6. Short Service Commission in the Army Technical Arms

Short Service Commission for seven years with a possibility for permanent commissions are offered for B. Sc. (Honours) physics first class Graduates or M. Sc. Graduates between ages of 20–40. Candidates must apply to the Army Headquarters Adjutant General's branch. D. Head-quarters P.O., New Delhi-11, after announcements are made in the press. The selected candidates will hold commissions in the Corps of Signals.

7. Sugar Technology.

M. Sc. Sugar Technology at Andhra University at Jeypore College of Science and Technology. This is taken after B. Sc. (Honours) Technology.

8. Pharmaceutical

M. Sc. (Technology) with Pharmaceuticals at Andhra University open for B. Sc. (Honours) Technology passed students with Pharmaceuticals as optionals.

SCOPE

Assistants to Government Chemical Examiners.

9. Communication Engineering

Diploma in Electrical Communication Engineering at (1) the Institute of Science, Bangalore—3 years.

Eligibility: Honours in Physics or Mathematics. (2) Indian Institute of Technology, Kharagpur—3 years.

Eligibility: Honours in Physics or Mathematics.

10. Power Engineering

Diploma in Power Engineering at the Institute of Science, Bangalore—3 years.

Eligibility: Honours in Physics or Mathematics.

11. Forestry

The Indian Forest College, Dehra Dun, has a two years' course in Forestry for Honours Science Graduates with at least a second class. Only those are accepted who have guarantee of employment after the course.

SCOPE

As Forest Officers; also as Development Officers, Ministry of Industries.

11. Extension Course in Forest Botany

There is extension course at the Forest Research Institute, Dehra Dun in *Forest Botany and Forest Entomology*. Duration 15 Days. B. Sc. Honours in Botany or Zoology degree holders are eligible.

Note :—In the following pages scope of careers is indicated for graduates in the several fields. Conditions of appointments may vary and many positions tabled may require experience.

13. Scope for B. Sc. Honours or M. Sc. Chemistry Graduates

I.A.S. Examinations.

Provincial Government Competitive Examinations.

Provincial Educational Service.

Educational Service in Colleges and Institutions.

Production Chemists, Ordnance Factories.

Inspector of Explosives, Ordnance Factories.

Assistant Works Managers, Cordite Factories.

As Biochemists in Blood Testing Laboratories.

Biochemists at Antigen Production Units.

Biochemists Fisheries Subordinate Services.

Technical Research Assistants, Ministry of Education.

Chemical Assistants at Government Testing House, Alipore, Calcutta.

Toxicologists under Ministry of Agriculture.

Analytical Chemists in Geological Survey of India.

Chemical Inspectors in the Office of Chief Adviser of Factories.

Research Assistants in Chemical Laboratories of Universities.

Research Assistants in the UNESCO International Laboratories in Paris.

Development Directors in the Office of Director General of Industries.

Junior Scientific Officers in Defence Science Organisation.

Assistant Factory Managers in the Medical Stores Departments at Madras, Bombay.

Senior Scientific Officers, Technical Development Establishment, Kanpur.

Junior Research Officers Technical Paper Pulp Section of Forest Research Station, Dehra Dun.

Research Assistants in Wood Preservation.

Research Assistants, Teachers in Colleges; as Biochemists in Hospitals.

Agronomists at the Indian Agricultural Stations.

Biochemical Research Officers at Institute of Fruit Technology, Mysore.

Assistants to Chemical Examiners in Police Departments.

Assistants to Chemical Examiners in Medical Service.

Examiner of Questioned Documents.

Field Officers, Department Wing.

Assistant Chemists, Indian Railways.

As Salt Inspectors.

Research Assistants in Fisheries Subordinate Services.

Junior Scientific Officers :—Generally those with two or more years of Research experience in the application of Chemistry to Industries are required. Also those who in addition have experience in accounting purchase and stores may find scope as Stores Officers in Technical Development Establishments.

PROFESSIONAL INSTITUTE

Royal Institute of Chemistry, 30, Rusell Square,London, W.C. 1.

14. Scope for B. Sc. Technology or M. Sc. Technology, Chemistry

As Kiln Operators and Superintendents, Inspector of Factories grade 3 in Provincial Government Service. (See also list of Chemical Industries).

As Assistant Chief, Industries Division, Planning Commission.

As Development Officers, Ministry of Industry.

Education Branch Defence Forces; Technical Remembrancers at Research Institutes; Assistant Chemists in compost schemes; Fertiliser Inspectors; Research assistants for Social Survey; Junior Analytical Chemists for Chemical Testing Laboratories.

Institute of Chemical Industries, Calcutta.

Bengal Chemical and Pharmaceutical works.

Laboratory Assistant under the Technical Development Establishment (Military Explosives) and other branches.

Deputy Development Officers in the Ministry of Commerce and Industry in the branches :—

Heavy Chemical (Fertilisers).

Heavy Chemicals (Alkalies).

Leather Industry.

Paper and Paper Board.

Research assistants in Naval Base Laboratories such as at Cochin and other places.

Note:—The Industrial and News edition of the Journal of Indian Chemical Society contains useful tips for student guidance to careers and courses in the field of chemistry. 92, Upper Circular Road, Calcutta-9. The Journal "Chemistry and Industry" often contains valuable information to guide student for concerns in the field.

15. Scope for Chemical Engineers

Biochemical Engineer, Government Penicillin Factory, Pimpri, and other Government Chemical Factories like Sindri Fertilisers; Development Departments, Ministry of Commerce.

Also read the following useful book:—'Industrial Prospects of Chemical Industries in India' by Madan, Technical Director of Industrial Chemicals, Limited.

As junior field officers (Plywood), Development Wing, Ministry of Commerce and Industry;

Chemists at D. D. T. Factory, Delhi.

Documentry Film:—Useful to science graduates to obtain illustration on scope and career are the Government of India's 'Story of Sindri' 'Industrial Mysore-series,' 'Lacs from Lac,' 'My Lady Nicotine,' 'Antartic adventure' 'Rain or Sunshine,' 'Hurricane Circuit,' 'Marine Marvels' and 'Phyrethreum.'

Note:—Second Class Degree holders in Chemistry, Metallurgy, or Chemical Technology are taken as Water Treatment Supervisors in the Railways.

2. With experience in Rubber Technology, Companies like 'Firestone Company' offer attractive careers.

3. Graduates in Chemistry, Applied Chemistry or Chemical Technology may find openings in the office of the Narcotics Division of the Government of India.

These people are also taken as Laboratory Assistants in the Railways.

List of some important Chemical Industries where Chemistry Graduates can find scope.

1. Zandu Pharmaceutical Works, Bombay.
2. Sandoz Limited, Madras.
3. Italab Limited, Bombay.
4. Wool Research Laboratory, Jaipar.
5. Forest Research Institute, Dehra Dun.

6. Inspectorate of General Stores, Calcutta.
7. New India Industries, Bombay.
8. May & Baker (India) Limited, Bombay.
9. National Rayon Corporation, Kalyan, Bombay.
10. Ciba Dyes Limited, Ahmedabad.
11. Tata Chemicals, Mithapur.
12. A. C. C. Limited, Bombay.
13. Bhavnagar Chemical Works, Vartej.
14. Ordnance Depot, Sewri, Bombay-15.
15. A. C. C. Limited, Chaibassa, Bihar.
16. Alembic Chemical Works Company Limited, Baroda.
17. National Chemical Laboratory, Poona-7.
18. Chemistry Division, Atomic Energy Commission, Bombay.
19. Hindustan Metal Company Limited, Bombay.
20. Swastic Oil Mills, Bombay.
21. Pioneer Magnesia Limited, Kharaghoda.
22. Goodlass Wall Limited, Bombay.
23. Exel Industries, Bombay.
24. Swastic Rubber Products Limited, Poona.
25. Bright Brothers (Plastics) Limited, Bombay.
26. Bakelite (India) Limited, Bombay.
27. Sarabhai Chemicals, Baroda.
28. Premier Chromate Works, Dadar, Bombay.
29. Cordite Factory, Aravankadu.
30. Anil Starch Products, Ahmedabad.
31. Hardcastle, Waud & Company Limited, Bombay.
32. Sterling Chemicals, Bombay.
33. Pure Drinks (Cocoa Cola) Limited, Bombay-18.
34. Lever Brothers (India) Limited, Bombay.
35. Larsen & Toubro, Bombay.
36. Alembic Glass Industries, Baroda.
37. Ibcon Limited, Bombay.
38. Collinson & Company, Bombay.
39. Supreme Industries Limited, Wadala, Bombay.
40. Eastern Chemicals, Sion, Bombay.
41. Sathe Biscuit & Confectionery Factory, Poona.
42. Corn Products (India) Limited, Bombay.
43. Chemo-Pharma Limited, Bombay.
44. Glaxo Laboratories, Bombay.
45. Atla Laboratories, Bombay.
46. I. C. I. (India) Limited, Bombay.

47. Burmah Shell Oil Company Limited, Calcutta.
48. Phoenix Chemical Works, Bombay.
49. Hoyle, Robson, Barnett & Company (India) Limited, Bombay.
50. Indian Plastics Limited, Kandivili, Bombay.
51. Godrej Soaps Limited, Bombay.
52. Asian Paints & Varnishes Company, Bombay.
53. Abbot Laboratories, Bombay.
54. Kemp & Company Limited, Bombay.
55. Thompson & Taylor, Bombay.
56. Fairdeal Corporation, Bombay.
57. Lederle Laboratories, Bombay.
58. Marc Limited, Bombay (also Marc-Ciba, Bombay).
59. Hill, Elliot & Company, Bombay.
60. Geoffery, Manners & Company Limited, Bombay.
61. Boots Pure Drug Company (India) Limited, Bombay.
62. British Drug Houses (India) Limited, Bombay.
63. Neumco Chemicals Limited, Bombay.
64. Haffkine Institute, Bombay.
65. Gurutman Laboratories, Bombay.
66. Jhaveri & Company, Bombay.

17. Scope after B.Sc. (Honours). or M.Sc. Botany

I.A.S. Competitive Examinations.

M.P.S.C. Competitive Examinations.

The Provincial Educational Service.

Technical Research Assistants, Central Ministry of Education.

Research Officers at the Central Marine Fisheries.

Research Station, Mandapam.

Research Officers, Forest Research Institute, Dehra Dun.

Assistant Cytogenetist Agricultural Research Institute, Delhi.

Plant Pathologists.

Rubber Development Superintendents.

Garden Superintendents in the Departments of Archeology.

Officers, Bureau of Plant protection and Quarantines.

Assistant Botanists, Potato certification substation, Kufri (Simla Hills).

Forest Botanists in State Forest Services.

Assistant Conservator of Forests in Provincial Forest Services.

Fruit Specialists in the Provincial Agricultural services.

Research assistants in provincial fisheries subordinate services.

Junior Analytical chemists for the chemical testing and analytical Labs (Government).

Lecturing and systematic Botanist in Agricultural subordinate service.

Government Mycologist in the agricultural subordinate service.

Assistant fruit specialists in the agricultural service.

Upper subordinates in the research station of the Agricultural subordinate service in the branches of Paddy, Cotton, Millet, Oil Seeds, Botany, Physiology.

Horticultural Abstractor, Council of Agricultural Research Systematic Pomologist, Council of Agricultural Research.

Assistant Economic Botanists, Scheme for Improvement of Maize crop, Indian Agricultural Research Institute.

Deputy Development Officers, Timber Development Wing.

Botanical Survey of India.

As junior research assistants, Coconut Research Station, Kasragod and similar institutes.

As Deputy Warden of fisheries.

PROFESSIONAL INSTITUTES

Indian Botanical Society, Royal Institute of Science, Mayo Road, Bombay.

18. Scope after B.Sc. Hons. or M.Sc. in Physics

I.A.S. Competitive Examinations.

M.P.S.C. Competitive Examinations.

The Provincial Educational Service.

Professional assistants in Indian Meteorological Service.

Assistant Microphotographists in the National Archives of India.

Agricultural Meteorologist in Agricultural Research Station, New Delhi.

Instrument Developments Assistants in the Directorate of Technical Developments, Mathematics Instrument office, Calcutta.

J.S.O.'s in the Central Board of Geophysics.

J.S.O.'s Spectroscopy in the Technical Development Establishment Labs. Kanpur.

Asst. Agricultural Soil Physicists.

Technical assistants to Police Wireless Officer, Provincial General Service.

Research Assistants in Provincial Fisheries Subordinate Service.

Second Physicist, Barnard Institute of Radiology, Medical Service.

Examiner of questioned documents in provincial general service.

Agricultural Meteorologists in provincial service.

Assistant Radio Engineers in Provincial Engineering Service.

Educational Corps, Defence Services.

Technical officers, Age 21—25, Indian Air Force (after training at Technical Training College, Jalahalli).

As Aerodrome officers ; Research Officers A.I.R.

Asst. Superintendents of Development—Instruments and Electronics at the Technical Development Establishment, Dehra Dun.

As Assistant Chiefs, Industries Division, Planning Commission; Assistant Works Manager, National Instrument Factory, Calcutta.

Microscope Instrument Factory, Lucknow (Read 'Instrument Practice'—monthly journal); Junior scientists, Defence Science Organisation; Assistant superintendents grade III Development, Instruments and Electronic, Dehra Dun.

Those who wish to take careers in Physics and its applications would do well to study the 'Physics in Industry' series published by the Institute of Physics, 47, Belgrave Square, London S. W. 1. Another book is 'Physics as career' by Norman Clarke also published by the Institute.

As Field officers, Ministry of Industry G.O.I.

The Australian Government offer scholarships to first class M.Sc. Physics graduates to obtain training in advanced research in Radio-Astronomy at the Commonwealth Scientific and Industrial Research Organisation, Australia.

The Institute of Physics, 47, Belgrave Square, London S.W.1.

19. Scope after an Honours or M.A. or M.Sc. in Mathematics

I.A.S. Competitive Examinations.

M.P.S.C. Competitive Examinations.

The Provincial Educational Service.

Subordinate Account Service.

Central Intelligence Officer, Intelligence Bureau of G.O.I.

Licence Supervisor, All India Radio.

Statistical Research Officer, Office of Economic Advisors of Governments. Also as Forest Statisticians.

Professional assistants to Indian Meteorological services.

Research officer, Bureau of Economics and Statistics.

Statisticians' Labour Bureau, Simla.

Statisticians, Agricultural Service.

Statistical investigators in A.G.'s branch.

Research Officer, Joint Cipher Bureau, Defence Ministry Maths. Adviser, Survey of India.

Statisticians, National Income Unit, Finance Ministry.

Actuaries in Insurance companies (after qualifying in this line).

As Assistant Conservator of Forests.

Statistical Officers, All India Radio (Research Section).

Assistant Mathematical research officers in Central Water Way Research Station, Poona.

Deputy Statistical Directors, Programme. Evalution organisation, Planning Commission.

Agricultural Meteorologists in the provincial service.

Statisticians, Directorate General of Health Services.

Educational Branch, Defence Forces.

Technical Officers, Age 21—25, Air Force after one year training at Technical Training College at Jalahalli

Research Officers (Natural Sources Division, Statistics Section) Planning Commission.

As field officers, Development Wing, Ministry of Industry, G.O.I.

20. General

Hons. or M.A. in English or Commerce or Law as administrative officers, and special duties branch Defence Forces.

First or second class graduates (Air Force) Age 21—23.

21. Scope after B.Sc. Hons. or M.Sc. Zoology

I.A.S. Competitive Examinations.

M.P.S.C. Competitive Examinations.

Provincial Educational Service.

Assistant Insects Entomologist, Indian Agricultural Research Institute.

Quarantine Entomologists, Directorate of plant protection quarantine.

Locust Entomologist.

Central marine fisheries research station, Mandapam.

Research officer, Embryology, algology, ecology and protozoology.

Officers, deep sea fishing station, Bombay.

Zoological Galleries of Indian Museums at Calcutta, Bombay and Madras.

Zoological Survey of India, Banares Cantonment.

Sardine research officers, Mackerel research officers, Sharks and rays research officers, research officers in Prawns, Mullases.

Marine Zoologists at the Department of Agriculture.

Technical assistants, Central Ministry of Education.

Inspector of fisheries in the fisheries departments.

Research assistants in Fisheries Subordinate Services.

Superintendent, Provincial Fisheries Subordinate Service.

Medical Biologist, King Institute, Guindy.

As Deputy warden of fisheries.

22. Scope after B.Sc. Honours or M.Sc. Geology

I.A.S. Competitive Examinations.

M.P.S.C. Competitive Examinations.

Provincial Educational Service.

J.S.O. Central Board of Geophysics.

Geophysicists and Geologists in Geological Survey of India.

Cement Manufacturing Companies.

Mica mines, and Indian Bureau of Mines,

Research officers (Natural Resources Division), Planning Commission.

Scholarships

1. Burma Shell Scholarships for study of Petroleum Technology Selection by the C.S.I.R., New Delhi.

2. Assam Oil Company Scholarship—for higher studies in U.K.—Selection by C.S.I.R. New Delhi.

23. The Ministry of Education, Government of India, give a small grant in aid for research workers for the purchase of special apparatus and equipment and other facilities. Candidates may apply to the Ministry of Education.

24. Science graduates may usefully register their names and qualifications with the Council of Scientific and Industrial Research, New Delhi who maintain a national register of scientific and technical personnel.

25. The National Research Council, Ottawa, Canada, offer research fellowships to science graduates for study in Canada.

STAGE III

CHAPTER—VI

GRADUATES IN ENGINEERING (FURTHER STUDIES)

CONTENTS

1. Sugar Technology.
2. Aeronautical Engineering.
3. Internal Combustion Engineering.
4. Diploma in Town and Regional Planning.
5. Master of Engineering.
6. Master of Engineering (Public Health).
7. Diploma in Power-engineering.
8. Diploma in Electrical Communication Engineering.
9. Special course in Concrete Technology.
10. Air Conditioning Electrical Engineering.
11. Refrigeration.
12. Mechanical Handling.
13. Production Technology.
14. Applied Geology and Soil Mechanics.
15. Photo-elasticity and Stress Analysis.
16. Engineering Materials and 'X'-ray Technology.
17. Advance Surveying and Air Surveying.
18. A. M. I. E. (India), (London).
19. Postgraduate Diploma in Automobile Engineering.
20. Short Service Commissions in Defence Forces.

B. E.

1. Sugar Technology

Institute of Sugar Technology, Kanpur—Associateship course A.I.S.E.—2½ years.

2. Aeronautical Engineering

A diploma course (D. I. I. Sc.) of two years duration is offered by the Indian Institute of Science, Bangalore.

3. Internal Combustion Engineering

Indian Institute of Science—two years—Diploma—qualification minimum B. E. Mechanical engineering.

4. Diploma in Town and Regional Planning

Calcutta University—Two years.

5. Master of Engineering

Bombay University in Electrical, Civil and Mechanical branches one year—written and practical examination. Mysore University has one year course for M. E.

6. Master of Engineering (Public Health)

Calcutta University—one year.

M. E., Government Engineering College, Jabalpur—2 years—after B. E. Honours.

Branches:
1. Soil Mechanics and Foundation Engineering.
2. Internal combustion Engineering.
3. High Voltage Engineering.
4. Radio and U.H.F. Engineering.
5. V.F. and Telephony Engineering.

7. Diploma in Power Engineering

At Institute of Science, Bangalore.

For Mechanical Engineering graduates—2 years.

For Electrical Engineering graduates—1 year.

For Honours graduates Physics or Mathematics—3 years.

8. Electrical Communication Engineering Diploma

1. At Institute of Science, Bangalore—one year for B. E. (Electrical Engineering)

2. At the Indian Institute of Technology, Kharagpur.

9. Special course in Concrete Technology and Structure

At Roorkee University open for civil engineers. There are two grades—junior and senior—6 weeks for Degree or Diploma holders in Engineering.

10. Air Conditioning Electrical Engineering

Roorkee University open to Engineers and other qualified persons.

11. Refrigeration (Mechanical Engineering)

Roorkee University, open to persons of Engineering graduate standard. Six weeks course—Minimum qualification—Degree in Mechanical Engineering.

12. Mechanical Handling

18 months course at Indian Institute of Technology, Kharagpur, minimum qualifications : B.E., in mechanical, electrical, or a degree in mining engineering.

13. Production Technology

18 months course at Indian Institute of Technology, Kharagpur. Minimum qualification—B.E. in Mechanical Engineering.

14. Applied Geology and Soil Mechanics

4 week course—at Roorkee—Degree or Diploma holders in Engineering are eligible.

15. Photo Elasticity and Stress analysis

3 weeks course at Roorkee University—Degree holders in Engineering are eligible.

16. Engineering Materials and Industrial 'X' Ray Technology

3 Weeks course at Roorkee University.

17. Advance Surveying and Air Surveying

4 Weeks course at Roorkee University. Degree or Diploma holders in Engineering are eligible.

18. A.I.M.E.E. (India), (London)

3 months couse in the following subjects :

Electrical Technology, Electrical Power, Line and Radio Communication, Electrical Measurements.

19. Post-graduate Diploma in Automobile Engineering

Bombay Government Diploma—Duration one and half years—V. J. Technical Institute—Admission qualifications—Mechanical engineering Diploma or Degree.

20. Short Service Commission in the Army Technical Arms.

CORPS OF ENGINEERS

(a) The candidate must have passed 'A' and 'B' of the Associate Membership Examination of the Institute of Engineers (India) or such other examinations as is accepted by the Institute in exemption thereof.

(b) A degree in Marine Engineering.

(c) Final Certificate of I.M.N.T.S. " Dufferin."

(d) Second Mates B.O.T. Ticket.

CORPS OF SIGNALS

(a) Engineering degree with line and wireless as one of the subjects.

(b) A graduate I. E. E. of the Institute of Electrical Engineers U.K. with Line or Radio communication as one of the subjects in section B.

(c) Associate membership of the Institute of Engineers (India) with electrical communication engineering as one of the subjects in section B.

CORPS OF ELECTRICAL AND MECHANICAL ENGINEERING

(a) Parts 'A' and 'B' of the associate membership examination of the Institute of Engineers (India).

(b) A degree in electrical and mechanical engineering of a recognised University.

Candidates should be of age between 23–40 and commissions will have a duration of seven years with a possibility of permanent commission. Candidates should apply to Army Head quarters P.O., New Delhi–11.

CORPS OF ELECTRICAL AND MECHANICAL ENGINEERS

Engineering graduates between 20 and 27 with subject Electrical and Mechanical engineering of a recognised University are eligible

to apply for the technical graduates course of the army for entry into the corps of electrical engineering. Candidates who have passed A and B parts of the exmination of the Institute of Engineers (India) are also eligible to apply. Candidates should apply to the Directorate of Personnel, Army HQRS. New Delhi.

2. INDIAN NAVY

The following engineering qualifications are necessary for entry into engineering branch of Indian Navy by direct recruitment.

(a) B.O.T. 1st or 2nd class certificate.

(b) A recognised degree in Mechanical Engineering.

(c) Five years apprenticeship in marine engineering workshop.

(d) Diploma in engineering followed by practical experience in Marine engineering.

Age limits (19½ to 30).

ELECTRICAL BRANCH

(a) Recognised degree in Electrical Engineering.

(b) Five years apprenticeship in an electrical works with training. Age limits (19½ to 20).

After a period of training the candidates will be granted commissions.

Recruitment is done through Services Selection Board, Navy Hq., New Delhi.

3. INDIAN AIR FORCE

Technical Branch—Age 21-25—Training for a year at Jalahalli.

(As conditions may vary the candidate must obtain full particulars from the nearest recruiting office).

21. Travelling Fellowships:-Nuffield Foundation awards travelling fellowships in engineering field to have training and experience in U. K.

STAGE III

CHAPTER—VII

HIGHER DEGREES

CONTENTS

1. Master of Science.
2. M.A. (Honours).
3. M. Litt.
4. Ph. D.
5. D. Litt. & D. Sc.
6. D. Phil (Com.)
7. Scope for General Graduates.
8. Scope for M.A. Graduates in History.
9. Scope for M.A. Graduates in Languages.
10. Scope for M.A. Graduates in Economics.
11. Scope for M.A. Graduates in Politics.
12. Scope for Psychology Graduates.
13. Scope for M.A. Graduates in Geography.
14. Scope for Philosophy Graduates.
15. Scope for Commerce Graduates.
16. G. O. I. Financial Assistance to Authors etc.

1. MASTER OF SCIENCE

University.	Research duration.		Qualification.
1. Agra.	2 years.	Examination.	Graduate.
2. Aligarh	2 ,,	,,	,,
	1 year	,,	B.A. (Honours) & B. Sc. Graduates.
	Nil	,,	Teachers who are graduates of this University.
3. Allahabad.	2 years	,,	Graduates.
4. Andhra.	1 year	,,	B.Sc. Honours & B.A. Honours graduates 1st or II class.
	2 years	,,	Honours graduates III class or pass graduates I or II class.

(*Note*:—For M.Sc. (Ag.) duration is 2 years)

5. Annamalai	1 year	,,	Honours Graduates.
	2 years	,,	Pass Graduates.
6. Banaras.	2 ,,	,,	Graduates.
7. Bombay.	2 ,,	Exam. or Thesis or combined.	Graduates.
8. Calcutta.	2 ,,	Exam.	Graduates.
9. Delhi.	2 ,,	,,	Honours graduates.
10. Gauhati.	2 ,,	,,	Graduates.
11. Lucknow.	1 year	,,	Honours graduates.
	2 years	,,	Pass graduates.
12. Madras.	1 year	,,	Honours graduates.
	1 ,,	Thesis	Honours graduates and professional degree holders.
	2 years	,,	Pass graduates.
13. Mysore.	2 ,,	Thesis or Exam.	Honours graduates.
14. Nagpur.	2 ,,	,,	Graduates.

University.	Research duration.		Qualification.
15. Osmania.	2 years	Examination.	Graduates.
16. Panjab.	2 ,,		,,
17. Patna.	2 ,,	,,	,,
18. Rajaputana.	2 ,,	,,	,,
19. Travancore.	2 ,,	,,	,,
20. Utkal.	2 ,,	,,	,,

2. M.A. (Hons.) Degree

Andhra University, Waltair—two years course for first or second class Honours graduates only—Research Degree.

3. M, Litt.

Annamalai	2 years	Graduates (Pass).
	1 year	Honours Graduates.
Madras.	2 years	Pass Graduates including subjects of Music, and Oriental Learning.
	1 year	Hons. graduates, M.A's and B.O.L. Honours.

4. Ph. D.

Agra.	2 years	University College Govt. Dept. Recognised Institute.	Master's degree of one years standing before taking up course.
Allahabad.	20 months	At University permission upto one year outside University in interest of Research.	Masters Degree. *Note:* A teacher of this University could also work for Ph.D.
Andhra	3 years	At the University itself.	B.A. Honours.
	2 ,,		M. Com. Honours.
	4 ,,		M.A. Honours. Third class Honours
Annamalai.	3 ,,	At the University.	Honours graduates.
	2 ,,	,,	M. Litt. or M. Sc.

University.	Research duration.		Qualification.
Banaras.	2 years	At the University. or at (1) Indian Inst. of Science. (2) The Paleo Botany Inst.	Master's Degree.
		(3) Tata Inst. of Fundamental Research.	B.Sc. in Mining, Metallurgy or Engineering.
Bombay.	3 ,,	At the University.	Bachelor's degeree.
	2 ,,		Master's Degree by Examination.
	1 year		Master's Degree by Research.
Calcutta.	2 years	At the University. Also special per mission for presentation of independent work.	Master's Degree.
Delhi.	2 ,,	At the University. Permission upto one year away from University in interest of Research.	Master's Degree.
Lucknow.	2 ,,	At the University.	Master's Degree.
Madras.	3 ,,	,,	Bachelor's Degree. (Two years standing before course).
	2 ,,	At the University.	Hons. Professional Degree (of one year standing) before entry to course.
	1 year	At the University.	Master's Degree Letters Science or Oriental language (One year standing before entry to course).
Mysore.	2 years	At the University.	Master's Degree.
	3 ,,	,,	B. Sc. Hons. Degree.

University.	Research duration.	Qualification.
Nagpur.	2 years At the University	Master's Degree.
Osmania.	3 ,, ,,	Master's Degree, I or II class only.
Patna.	3 ,, ,,	Master's Degree. I or II class.
Rajputana.	2 ,, ,,	Master's Degree.
Utkal.	2 ,, ,,	Master's Degree I or II class.

5. D. Litt. & D.Sc.

University.	Duration or Standing.	Minimum Qualification
1. Agra	2 years Standing	Ph. D.
	5 years ,,	M. A., M. Com, M.Sc. and M.Sc. (Agriculture).
2. Allahabad	20 months course The title awarded is Ph. D.	M.A.'s (Economics.)
	2 years standing	D. Litt. Economics
	3 years ,,	M.Sc., M.B.B.S.
3. Andhra	The title awarded is D.Sc.	
4. Annamalai	1 year	Ph. D.
	2 years	M.Sc. (M.Litt).
5. Banaras	3 ,,	Ph. D.
	7 ,,	M.A. or M.Com.
	6 years in the University.	M.A. or M.Com.
6. Bombay	2 years	Ph. D.
	3 years	M.A. or M.Sc,
	7 or 6 years	B.A. B.Sc., Respy.
7. Calcutta	3 years	M.A. or M.Sc.

'*Note:* There will be, besides thesis, written examinations for those who have not got first class'.

University.	Duration or Standing.	Minimum Qualification.
8. Lucknow	5 years	Ph. D.

(*Note :* Alternatively candidates should do 3 years research under the University).

6. Madras	2 years	after Ph. D.
	3 years	after M.Litt., M.O.L. M.Sc.
	7 years	after first Degree.
10. Mysore	5 years	after Honours degree.
	4 years	after Master's degree.
	5 years	after M.B.B.S.
11. Nagpur	D.Litt 3 years standing Ph. D.	
	8 years standing M. A.	
	D.Sc. 3 years standing M.Sc.	
12. Patna	D.Sc. 3 years after M.Sc.	

6. D. Phil. (Com.)

Allahabad University awards the title D. Phil (Com.) for Commerce subjects. The conditions are same for D. Phil (Arts.)

7. Scope for general graduates

Public Relations and Publicity Officers, Railways.
Reference officers, A. I. R.
Transportation officers.
Employment officers.
Managers and assistant managers.
Stores officers.
Traffic managers in Ports.
Administrative works managers, Ministry of Defence.
Complaints officers Posts and Telegraphs.

Precis writers in the Publication Bureau of Ministry of Information.

Audit Clerks, Local Fund Audit Offices, Provincial Governments;

Equipment branch, Defence Forces (Age limits 21–23).

As Inspector of Notified Factories (Science Degree).

Assistant Station Directors, A.I.R.
Assistant Campaign Officers, Press Information Bureau.
Assistant Talks Officers External Services A.I.R.

Upper Division clerks in the office of Deputy Accountant General.

Project Evaluation officers, Programme Evaluation Organisation, Planning Commission.

As Upper Division Clerks in Railway Audit Service.

As Tourist Guides and Information Officers, Ministry of Transport.

Committee Officer, Parliament Secretariat.

Junior Sales Tax officers in Bombay and other Government Sales Tax Service Class II.

Income-tax officers.

As junior translators in the Translation Bureau of Legal Departments (a written test is generally prescribed).

As Sub Editors in the Subordinate General Educational Services of Madhya Pradesh Govt. and other Govts.

As National Savings Officer (Provincial).

8. Scope after B.A. Honours or M.A. in History

I.A.S. Competitive Examinations.
Provincial Competitive Examinations.
Research officers in the External Affairs Ministry.
Teaching in Armed Forces Academy.
Archives Departments.
Archeological Excavation works.
Curator of Historical Museums.
Assistant Superintendents Prehistory, Department of Archeology.

Scholarships :—Sri William Meyer Studentship in European History at University College, London—one year.

9. Scope after Literature Honours or M.A. in languages

I.A.S. Competitive Examinations.
Provincial Competitive Examinations.
Provincial Educational Service.
School of Foreign Languages, Ministry of Defence.
Translators in High Courts.
Examiner of Books, Bombay and other governments.

Assistant superintendents (Arabic and Persian inscriptions), Department of Archeology.

Translator, Subsidiary Intelligence Bureau, Calcutta.

10. Scope after B.A. Honours or M.A. in Economics

I.A.S. Competitive Examinations.

Provincial Competitive Examinations.

Provincial Educational Service.

Officers, Commercial Intelligence and Statistics Office, Calcutta.

Department of Industrial Statistics of Industries & Commerce.

Economic Investigators, Grade I, Community Projects.

Administration, Planning Commission.

Community Project Officers.

Equipment Officers, Defence Forces (age limit 21—23).

As Provident Fund Research Officers, Ministry of Labour.

Community Projects Officer on Rural Economics, Planning Commission.

Assistant Chief (Economic Division) Planning Commission.

Research Officers (Economic Division) Planning Commission.

Economics Investigators (Economics Division and Development Plan section) Planning Commission.

Labour Intelligence officers.

Conciliation officers.

Resident Labour Inspectors.

Senior Investigators.

Senior Statistical Assistants.

Welfare Superintendents.

Commercial Tax officers.

Entertainment Tax officers.

Research officers, Programmes Evaluation Organisation, Planning Commission.

Research Officers, Bureau of Economics and Statistics.

Professional Society:—Royal Economic Society, 4, Portugal St, Kingsway, London W. C. 2.

11. Scope after B.A. Honours or M.A. in Politics

I.A.S. Competitive Examinations.

Provincial competitive Examinations.

Provincial Educational Service.

Research officers at the Historical Division, Ministry of External Affairs.

Assistant Editors, News papers and magazines.

12. Scope for Psychology Graduates

I.A.S. Examinations.

Provincial Competitive Examinations.

Provincial Educational Service.

Psychology Officers, Defence Forces.

Project Psychology Officers.

Lecturers in special schools for backward people.

Lecturers in Jail Training Schools.

Scholarships :—Lady Higgins Scholarship—1 year for women—tenable at Bedford College for Women, London.

13. Scope after M.A. or Honours in Geography

I.A.S. Competitive Examinations.

Provincial Competitive Examinations.

Provincial Educational Service.

Survey of India Departments.

Research officer (Natural Resources Research Division) Planning Commission.

Scholarships :—Sri William Meyer Scholarship at University College, London—one year—subject Geography of India.

14. Scope for Graduates in Philosophy

I.A.S Competitive Examinations.

Provincial Educational Service.

As Probation Officers.

Scholarships :—1. Lady Higgins scholarship 1 year for women tenable at Bedford College for women, London.

2. Susan Stebbing Studentship 1 year for women—tenable at Bedford College for women, London.

15. Scope for Graduates in Commerce

I.A.S. Competitive Examinations.

Provincial Competitive Examinations.

Incometax officers.

Marketing Officers.

Currency Officers, Reserve Bank.

Bank Agents.

16. The Govt. of India offer limited financial assistance to persons distinguished in letters, art and other walks of life who may be in indigent circumstances. These persons must have made substantial contributions in the fields of literature and art. Further particulars and forms could be obtained from Ministry of Education.

17. The " Hindustan Times " together with other news papers of the world, offer prize awards for best short stories in their world short story contest.

STAGE III

CHAPTER VIII

GENERAL POST GRADUATE STUDIES INCLUDING MEDICAL COURSES.

CONTENTS

1. Veterinary Science.
2. Miscellaneous Post-graduate Diplomas.
3. Medical Post-graduate Diplomas.
4. Medical Post-graduate Degrees.
5. Malaria Course for Medical Officers.
6. Law Courses.
7. Madras Bar Council Examination.
8. M. Com.
9. M. L.

1. Veterinary Science Courses—Indian Veterinary Research Institute, Izatnagar.

(a) Post Graduate Refresher Course in Veterinary Science—Six months—Subjects :—Pathologoy, Entomology, Biochemistry, and Statistics. Minimum qualification: Degree or Diploma in Veterinary Science.

(b) Diploma in Tropical Veterinary Science—D.T.V.Sc.—useful for Field workers, Teachers and others in the Veterinary profession—Specialisation in the following groups (a) Animal Bacteriology, Animal Pathology, Animal Parasitology (b) Animal Genetics, Animal Nutrition and Poultry Science.

(c) Advanced courses in Animal husbandry—8 months course—Minimum qualification—A degree or diploma in Veterinary Science or in Dairying or in Agriculture with experience of Live Stock.

(d) Advanced course in Poultry Husbandry :—6 months course—Minimum qualification graduate in Veterinary Science, diploma in Dairying or Agriculture or to the graduates in General Science.

(e) Course of Training in the technique of manufacture of Sera, Vaccines etc :—9 months course. Minimum qualification : Degree or Diploma in Veterinary Science with experience of laboratory work.

(f) Advanced course in Artificial insemination and Physio-pathology of reproduction : six months—admission restricted to persons holding a Degree in Veterinary Science or Animal Breeding and Genetics or in Agricultural Science Animal Husbandry group or in Dairying.

(g) Associateship of the Indian Veterinary Research Institute, Izatnagar :—Two year Post-graduate Training at the Institute, Minimum qualification a degree or diploma in Veterinary Science, preference will be given to those, who in addition, have a degree in Biological Sciences, Graduates in Physics, Chemistry, Physiology and/or Zoology and graduates in Agricultural and Dairying will also be eligible provided they have working knowledge of Farm Animals and their physiology.

2. Miscellaneous Post-graduate Diplomas

1. Diploma in Economics—Madras University—two years part-time and one year full time.

2. Diploma in Politics and Public Administration, Madras University—2 years—Lucknow University—one year.

3. Diploma in Co-operation—Madras University—one year—open for B.A.'s and B.A. (Honours) History or Economics.

4. Diploma in Statistics—Madras University—two years.

5. Diploma in Anthropology—Madras University—two years. —Certificate—one year.

6. Diploma in Journalism—Madras University—one year, (for this, the session is generally from January to December—concurrent with apprenticeship in the office of a journal).

Hislop College—Nagpur—one year diploma. Also Panjab University has a one year diploma course in this subject). Read "Indian Press " by Margarita Barns and " Teach yourself Journalism " E.U.P. Series.

SCOPE

Leading newspapers, weeklies, the A.I.R. Journals and the P.T.I.; Publicity Officers; Information Officers; A.I.R. Journalist, A.I.R.; Community Projects Officers (Public Relations). Navy Information Officers, Armed Forces Publicity Officers.

Documentary Film in this connection is the G.O.I's " Indian Press '

7. Diploma in Spoken English—Calcutta University—open for graduates with Teacher's licence.

8. Diploma in Foreign Affairs and Diplomacy—one year—Lucknow University—Open for M.A's only.

9. Diploma in Indian Philosophy and Culture—Banaras University—Duration one year.

10. Diploma in Dietetics: Calcutta University—one year course for Science or Nursing graduates or diploma holders in domestic Science.

11. Diploma in Physical Education—1 year—Madras University.

12. Diploma in Psychology—Lucknow University—one year.

Statistics Training

There is a two year training given at the Indian Institute of Statistics for which honours graduates in Statistcis, Maths., Physics or Economics are eligible. The Institute conducts the associateship and the associate fellowship examinations (A.F.I.S.I.) The address of the Institute is the Indian Institute of Statistics, Presidency College, Calcutta.

13. Diploma Archeology—one year—open for M.A's generally. Read in this connection the Government of India publication 'Archeology in India.'

14. Diploma in Indology—1 year—Mysore University Maharaja's College, Mysore.

15. Diploma in Bacteriology and Hygiene—Travancore University—1 year—open for B. Sc. graduates.

16. Diploma in Argriculture—2 years—Travancore University—open for B. Sc. graduates in Chemistry, Zoology or Botany.

17. Diploma (2 years) and certificate (1 year) in French, Calcutta University.

18. Diploma (2 years) and certificate (1 year) in German, Calcutta University.

19. Diploma (2 years) and certificate (1 year) in Russian, Calcutta University.

20. Diploma (2 years) and certificate (1 year) in Chinese, Calcutta University.

21. Diploma (2 years) and certificate (1 year) in Spanish, Calcutta University.

22. Diploma (2 years) and certificate (1 year) in Portuguese, Calcutta University.

23. Diploma (2 years) and certificate (1 year) in Italian, Calcutta University.

24. Diploma (2 years) and certificate (1 year) in Persian, Calcutta University.

25. Diploma (2 years) and certificate (1 year) in Arabic, Calcutta University.

26. Diploma (2 years) and certificate (1 year) in Burmese, Calcutta University.

27. Diploma (2 years) and certificate (1 year) in Japanese, Calcutta University.

28. Diploma (2 years) and certificate (1 year) in Indonesian, Calcutta University.

29. Diploma (2 years) and certificate (1 year) in Bengali, Calcutta University.

30. Diploma (2 years) and certificate (1 year) in Hindi, Calcutta University.

31. Diploma (2 years) and certificate (1 year) in Urdu, Calcutta University.

32. Diploma in Social Science—Madras University—2 yrs.

33. Diploma in Museology—2 years—Baroda University.

34. B.Sc. (Textiles)—Punjab University at Technological Institute of Textiles, Bhiwani.

35. Diploma in Economic Statistics—Delhi School of Economics.

3. Post Graduate Diplomas (Medical)

INTRODUCTION

There are increasing amneties provided for further qualification in Medicine and Surgery in India. These qualifications are essential for higher appointments, in the different specialised fields of this profession. Many Governments like Madhya Pradesh have a special department of medical specialists, Leprosy Clinics, T. B. Sanitoriums, B. C. G. campaigns, Anti-malaria campaigns and others require specialised qualifications. Specialists are also taken in the Superior Revenue Establishment of the Railways.

INSTITUTES

3·1. Lucknow

Public Health, Radiology, Laryngology and Otology, Gynæcology and Obstetrics, Forensic Medicine, Chemical Pathology, T.B., Opthalmology, Dental Surgery.

Andhra University

One year ; D.L.O, ; D.V. ; D.D. ; D.A. ; D.O. ; D.G.O.

3·3. **Bombay University**

Diploma in Psychological Medicine – 18 months.

Diploma in Medical Radiology & Electrology—one year.

Diploma in Anaesthesia—one year.

Diploma in Skin and V. D.—one year.

Diploma in Forensic medicine—one year.

Diploma in Public Health—six months—Theory.
" " —Practical.

3·4. **Calcutta University**

Diploma in Public Health—six months—Theory.
" " —Practical.

Diploma in Opthalmology—one year.

Diploma in Maternity and child welfare—one year.

Diploma in Tuberculosis Diseases—nine months.

Diploma in Industrial Health—one year.

3·5. **Delhi University**

Diploma in Tuberculosis Diseases—one year work at hospital.

3·6. **Madras University**

Diploma in Gynaecology & Obstetrics—one year.

Diploma in Venereology—one year.

Diploma in Dermetology—one year.

Diploma in Ophthalmology—one year.

Diploma in Oto-Rhino-laryngology-one year.

Diploma in Radiology-one year.

Diploma in Orthopaedics-one year.

Diploma in Tuberculosis-one year.

3·7. **Punjab University**

Diploma in Laryngology and Otology—1 year.
Diploma in Tuberculosis Diseases—9 months.
Diploma in Opthalmic Medicine and Surgery—1 year.
Courses at V.J. Hospital at Amritsar.

3·8. F. R. C. S. Edinburgh

The Primary examination for F.R.C.S. Edinburgh are held at Bombay if there are sufficient number of candidates. Such doctors who wish to take this examination may register with the Bombay University Students' Information Bureau.

3·9. Biometric Technic

A brief and intensive course of three months on Biometric Technic is available at the All-India Institute of Hygiene and Public Health, 110, Chitranjan Avenue, Calcutta-12.

3·10. Applied Psychology

Calcutta University has a one year certificate course in Applied Psychology for medical graduates.

3·11. Certificate in Industrial Hygiene

3 months course at All India Institute of Hygiene, Calcutta.

3·12. Certificate in Nutrition

3 months, besides doctors, others like graduates in Agriculture Physiology and Bio-chemistry are eligible to take this course at All India Institute of Public Health and Hygiene.

3·13. Certificate in Public Health Engineering

3 months course at the All India Institute of Public Health, Calcutta, open for engineers, overseers and suboverseers of Public Health Departments.

3·14. Membership of State Medical Faculty, Punjab

1 year Diploma M.S.M.F. Course at Medical College, Amritsar, open for Licentiate Doctors.

4. Post Graduate Degrees (Medical)

4·1. M.D. & M.S.

Bombay University, Madras University, Calcutta University, Andhra University, Agra University, Patna University, and Punjab University.

General Qualifications :

One year House Surgency and one year course in the department of the special subject. Three years from taking M.B.

4·2. Agra

M.D.: Medicine, Pathology, Pharmacology, Physiology.

M.S.: Surgery, Opthalmology, Obstetrics, Gynaecology, Anatomy.

4·3. Bombay

M.D.: Medicine, Tropical Medicine, Pathology, Midwifery, Obstetrics, Gynaecology, Pharmacology, Pediatrics, Tuberculosis.

M.S.: General Surgery, O. R. L., Orthopedics and Opthalmology.

4·4. Calcutta

M.D.: M.S. Obstetrics, also M.D.

4·5. Lucknow

M.D.: Medicine, Pathology, Forensic Medicine, State Medicine, Pharmacology, Physiology.

M.S.: Anatomy.

4·6. Madras

M.D.: Medicine, Midwifery, Pathology, Bacteriology.

M.S.: General Surgery, O.R.L., Opthalmology, Orthopaedics.

4·7. Patna

M.S.: General, Opthalmology, O.R.L., Gynaecology.

4·8. Punjab

M.D.: Psychiatry, Neurology, Tropical Diseases and Helminthology, Pediatrics, Dermatology, Haematology, Tuberculosis, Midwifery and Gynaecology, Radiology.

M.S.: Operative Surgery, Orthopaedics, Opthalmology, E.N.T.

4·9. Doctor of Hygiene

Bombay University, one year open for Bachelor of Hygiene of Bombay University or equivalent qualification.

4·10. Doctor of Science

Mysore University, 5 years after M. B. Thesis or published papers.

4·11. Doctor of Science, Public Health

At All India Institute of Hygiene and Public Health, Calcutta. Two years after D. P. H. or three years work on special field.

4·12. Sanitary Science

There is a one year degree course at Madras University for M.B.B.S. graduates. The degree awarded is B.Sc.

SCOPE

Provincial Public Health Service.

4·13. **The College of Physicans and Surgeons, Bombay,** awards the following qualifications :

1. F.C.P.S. 2. D.O.M.S. 3. D.G.O. 4. D.C.H. 5. D.P.B. 6. D.T.M.H. 7. D.P.M. 8. D.D.V. 9. D.O.R.L. 10. D.ortho 11. D.A. 12. D.M.R.E. 13. D.Ana. 14. D. phy. 15. M.C.P.S. 17. L.C.P.S. 17. L.D.S.,C.P.S.

For regular and approved institutes candidates must apply to the Secretary, The College of Physicians and Surgeons, Bombay.

4·15. M.Sc.

By thesis on Medical subjects can be obtained from Madras and Andhra University after approved course under a supervisor in a recognised institution. Duration-one year.

4·16. *The World Health Organisation* arranges for Indian doctors and health workers to study abroad in a wide variety of medical and nursing subjects under fellowships financed by WHO, UNICEF, and U.N. Technical assistance. Fellowships are granted only to persons specially recommended by the government and only on condition that on return to their home countries beneficiaries remain in government service for at least a stipulated number of years.

4·17. Travelling Fellowships: The Nuffield Foundation offers travelling fellowships to medical graduates for research and experience in U.K.

5. Malaria course for Medical Officers

An advanced course in Malariology for Medical Officers lasting 12 weeks is held at the Malaria Institute of India generally in Febrauary/April every year. Normally candidates nominated by

the various State Governments, Railways, Industrial Concerns etc., who are likely to be utilized for malaria control duties are given preference for admission.

No tuition fees are charged but the candidates have to make their own arrangements with regard to board, lodging, and conveyance.

At least three visits to the different areas of the country where varied malaria problems exist are included in the programme The expenditure in that connection which is estimated to be Rs. 200/- per candidate, is borne either by the candidates or the nominating authorities.

Following particulars should be given in the applications which should be forwarded through the proper channel :—

Most of the lectures are based on Health Bulletins of the Malaria Bureau series available on payment from the Manager of Publications, Civil lines, Delhi.

(a) Name and complete address of the candidate.

(b) Medical qualifications.

(c) Post-graduate qualifications (D.P.H.,D.T.M. etc.)

(d) Previous work on Malaria.

(e) Proposed employment after the training.

(f) Particulars of previous training if any, at the Malaria Institute of India.

(g) Previous Laboratory experience.

Note :—Enquiries regarding the exact dates of the course may be made in October or the following months.

SCOPE

Anti-malaria projects of Governments and WHO in India–as Malaria Control Officers.

6. Law

INTRODUCTION

At present there are various classes of legal practitioners in India. The majority of them are Advocates enrolled on the rolls of one or the other of the High Courts of India under the provisions of the Indian Bar Councils Act, 1926. The Supreme Court of India has its own roll of practitioners, and under the provisions of the Supreme

Court Advocates (practice in High Courts) Act, 1951, any Advocate of the Supreme Court is entitled to practise in any High Court in India in a Part A, Part B or Part C State. In each State there are practitioners of lower grade, called Pleaders and by the other names, who have a right to practise only in a limited number or grade of Subordinate Courts.

2· The field for general legal practice is now much wider than it was ever before. So far as the litigious work in the High Courts and in regular Civil Courts is concerned, it is on the increase. In the High Court and the Supreme Court the proceedings which arise as a result of the fundamental rights guaranteed by the Constitution are numerous. Apart from this, there are now many administrative or quasi-judical tribunal such as Tribunals under the Industrial Disputes Act and Workmen's Compensation Act and so on, before which there is a large demand for lawyers to appear for the parties. At the same time, the right of audience of Advocates before some of these tribunals is restricted. On the whole the possibilities and prospects of law as a career are now very good indeed.

INSTITUTES

6·1 **Agra University.**

LL. B., Agra College, Agra.
Meerut College, Meerut.
Holkar College, Indore.
S. D. College, Kanpur.
Bareilly College, Bareilly.
Government College, Ajmer.
D. A. V. College, Kanpur.
Victoria College, Gwalior.
St. Andrews College, Gorakpur.
Darbar College, Rewa.
D. A. V. College, Dehra Dun.
Madhava College, Ujjain.
K. G. K. Colllege, Moradabad.
(Two years courses after graduation).

6·2 **Allahabad University.** LL. B.

6·3 **Andhra University.** B. L. 2 years after graduation.

6·4 **Banaras University.** 2 years LL. B.

6·5 **Calcutta University.** 3 years Degree course.

6·6 **Delhi University.** (1) 2 years LL. B. Degree course, (2) 3 years B.C.L. Degree course.

For admission to (2) a candidate must have taken an Honours degree in Arts, Science or Commerce.

6·7 Lucknow University. 2 years LL. B.

6·8 Madras University. 2 years B.L.

6·9 Nagpur University. 2 years LL. B.

6·10 Osmania University. 2 years LL. B.

6·11 Patna University. 2 years B.L.

6·12 Rajputana University. 2 years LL. B.

6·13 Travancore University. 2 years B.L.

SCOPE

Practice in courts; Judical Members, Incometax Appelate Tribunal; Assistant Government agents for court agency section of the solicitors branch of Ministry of Law; Assistants Solicitors to Government of India Ministry of Law; Solicitors High Commission for India; Public Prosecutors; Provincial subordinate civil judical Service as Sub-Magistrates, or Sarishtardars; Superintendents, Legal departments (Government.) Sub Registrars in Registration Subordinate service; as Puisne Judge of the Court of Small Causes in Provincial Judicial service; Official Recivers-judicial service, part-time lecturers in Law College, Assistant Public Prosecutors. As first assistants to Legal assistants, Railways, age generally under 35.

Civil Judges cum Resident Magistrates; as Civil Judges class II; Law lecturers at Administrative Training School, Delhi as well as other Law Colleges; as Deputy Secretary, Council of States, and other Peoples Houses; as Incometax Officers; as Presidency Magistrates; Legal Remembrancers.

Note :—Evening classes are held between 5 and 9 p.m. at the College of Law, Saifabad, Hyderabad, Decan.
Also at University Law College, Calcutta and at S. N. Banerjee Law College, Calcutta.

It is possible to combine M.A., and LL. B. courses at Bombay University and the Delhi University.

THE MADRAS BAR COUNCIL EXAMINATION

The Law Apprenticeship Course

In India, a student who has taken the Law Degree is required to undergo an apprentice course which lasts usually for a year. He will have to join an Advocate of some standing—who is called a "Master"—and attend his Chambers and the Courts. The scope of this course and its syllabus differ in several respects in the several States just as period of study, the syllabus etc., for the students who desire to

qualify themselves for the Law Degree differs. Under the Bar Council Rules in Madras, diaries will have to be maintained by the apprentices showing a record of the cases studied in the chambers of the Master and the cases in Court which he attended. The apprentices should also attend at least 50% of the lectures arranged by the Bar Council generally on Civil and Criminal Procedures, Limitation, Company Law, Insolvency, Professional Conduct and Advocacy.

The Bar Council Examination

The apprentices should also pass the following examination held by the Bar Council :—

I Part :—The Code of Civil Procedure, the Civil Rules of Practice, the Original and the Appellate Side Rules; and

II Part :—The Code of Criminal Procedure and the Criminal Rules of Practice.

There are two papers in each part: one is with books and the other without books.

The examinations are held twice a year generally in the months of April and November (Rule proposed to be amended as March and November). The fee for the Examination is Rs. 25/- whether it be for one part or both parts and it should be paid to the credit of the Bar Council into the Imperial Bank of India and the receipt therefor and a Character Certificate obtained from the Master should be sent so as to reach the Secretary, Bar Council before a date prscribed. The late applications may be received within 10 days from the due date and is to be accompanied by way of penalty of an additional sum of Rs. 5/-. No candidate shall be declared to have passed either part unless he has obtained 2/5 of the total marks obtainable in that part. A candidate who has passed both parts shall be declared to have passed the examinatton.

After the apprenticeship course aforesaid, the apprentices are entitled to apply for enrolment filing the necessary papers and remitting Rs. 50/- to the credit of the Bar Council. The Bar Council issues the Certificate which is filed in the High Court along with an application bearing a Court fee Stamp for Rs. 20/- and a receipt of Rs. 625/- from the Treasury in lieu of Stamp Duty for enrolment. He is then enrolled.

8. Facilities for study of M. Com.

8·1 **Agra University.** Two years after B. Com.

8·2 **Allahabad University.** Two years after B. Com. Thesis in second year.

8·3 **Andhra University.** One year after B. Com. Honours or two years after B. Com. Also M. Com. Honours is available—one year after M. Com. The candidate must do research in selected subject.

8·4 **Banaras University.** Two years after B. Com.

8·5 **Bombay University.** Two years after B. Com. Thesis or written examination.

8·6 **Delhi University.** Two years after B. Com. Honours.

8·7 **Gauhati University.** Two years after B. Com.

8·8 **Lucknow University.** Two years after B. Com.

8·9 **Nagpur University.** Two years after B. Com.

8·10 **Rajputana University.** Two years after B. Com.

8·11 **Punjab University.** Two years after B. Com.

9. Facilities for study of M.L.

9.1 **Agra University.** One year course after LL. B. Degree granted LL. M.

9·2 **Aligarh University.** LL. M.

9·3 **Allahabad University.** Two years after LL. B.

9·4 **Andhra University.** Two years course after B.L. For D.L. two further years after M.L.

9·5 **Banaras University.** Two years course after LL .B. For LL. D. one further year after LL. M.

9·6 **Bombay University.** Two years after LL. B.

9·7 **Calcutta University.** M.L. For D. L. one further year after M. L.

9·8 **Lucknow University.** Two years after LL. B. For D.L. three years standing after LL. M.

9·9 **Madras University.** Two years after B. L.

9·10 **Nagpur University.** Two years after LL. B.

9·11 **Osmania University.** Two years after graduation in Law.

9·12 **Punjab Uuiversity.** LL. M. two year after LL. B. The Doctor of Laws is granted on the basis of Thesis.

9·13 **Patna University.** M. L. also the Doctor of Laws is awarded on the basis of Thesis one year after M. L.

9·14 **Rajputana University.** Two years after LL. B. Also teachers of Law could take the examination for LL. M. privately after three years of teaching law.

9·15 **Travancore University.** Two years after B. L. written examination and thesis.

9·16 **Utkal University.** M. L.

STAGE III

CHAPTER—III

GENERAL AND MISCELLANEOUS COURSES

CONTENTS

1. Army Dental Corps.
2. Library Science.
3. Psychology.
4. Applied Psychology.
5. Archives Keeping.
6. Horticulture.
7. Educational Travel.
8. Sociology.
9. Indian Institute of Personnel Management.
10. French and German.
11. Statistics.
12. Colliery Managers' Certificate of Competency.
13. Museum Technique.
14. Chartered Accountants.
15. Local self Government.
16. Professional Institutes.
17. Regular Commissions in the Armed Forces–Doctors.
18. Scholarships for overseas studies.
19. Private appearance to University Examinations.

1. Army Dental Corps

Short service regular commissions are given in the Indian Armed Forces Dental Corps. The candidate should have the following qualifications:

1. He should be in possession of a Dental qualification recognised under section of the Indian Dentists Act of 1948 or have a foreign dental qualification recognised under the Indian Dental Act.

2. Age under 45, relaxable for specialists of high merit.

Applications must be made to the Director General, Armed Forces Medical Services, Ministry of Defence, 'F' Block, New Delhi. Candidates may apply after due announcements of vacancies appear in the press.

2. Library Science

There is good scope for the trained young man in the growing number and quality of libraries either private or those of universities and research institutions and those of Government.

The following are the courses in the field :—

1. One year diploma courses are available at Madras, Banaras, Delhi and Calcutta Universities.

2. Two years degree course at Delhi University.

PROFESSIONAL INSTITUTES

1. The Library Association, Chaucer House, Malet Place, London. (Examinations could be taken in special fields also.)

2. The Library Association of India.

Training could be obtained in the Government and the University libraries. Abroad, a one year training facility for Indian graduates is afforded at the Public Library of South Wales, Sydney, Australia. The age limit is 30 and the fees for the year approximately Rs. 300/-. Forms could be obtained directly from the Principal Librarian at Sydney.

SCOPE

Government, College, University and Municipal Libraries; also in Historical and Research Division, External Affairs Ministry, Libraries of Research Institutions, Secretariat Libraries, Provincial State Libraries under D.P.I.

Note :—There is a brief course on American library methods at the U.S.I.S., Mount Road, Madras.

2. The Government of India have a one year in-service library science course at the Central Secretariat open for graduate Government Servants. Applications must be addressed to The Director, Government of India in-service Library Science Course, c/o The Central Secretariat Library, Ministry of Education, New Delhi.

3. Psychology

There is a one year diploma course in Psychology for graduates at Lucknow University. Teachers who have passed Intermediate examination may also be allowed to take this course.

4. Applied Psychology—Certificate

Calcutta University has a one year certificate course in Applied Psychology to B.A. or B. Sc. passed students who have offered Psychology as a subject. B.T's are also eligible for the course.

Punjab University offers M.A. in Psychology.

Madras University offers M.A. in Psychology.

SCOPE

Pointer writers in Services Selection Board, Ministry of Defence; as Assistant Psychologists, Armed Forces Headquarters.

5. Archives

Diploma in Archives keeping—Government of India Department of Archives, New Delhi—one year—Min. qualification—Degree.

6. Horticulture

Diploma in Horticulture of Madras University—run by Government of Madras Agricultural Department—Apply Fruit Specialist, Lawley Road, Coimbatore. Min. qualification B. Sc., (Ag.) or B. Sc. or B. Sc. (Honours) Botany with horticultural experience.

SCOPE

Research Assistants, Agricultural Demonstrators, Farm Managers, Teaching Assistants, Superintendents of Agricultural and Fruit Research Stations, District Agricultural Officers, Special officers in charge of nurseries; Senior Horticultural Inspectors; Garden overseers, Fruit Utilisation and Marketing officers.

7. Educational Travel

The All India Committee of the World Assembly of Students arrange Educational tour of India under some concessions. Candidates may contact its secretary at 2/21 First Line Beach, Madras for particulars.

8. Sociology

1. Tata School of Sociology, 105/109, Ghod Bunder Road, Andheri, Bombay :—Admission qualification—generally an Honours in Economics or Sociology or Psychology with a first class or second.

National Y. W. C. A. School Social Work, The Mall at the University Road, New Delhi. 2 years—Admission qualification M.A. in Economics and kindred subjects—M.A. (Social Work) degree granted by University of Delhi. For research Delhi has a department of research in social science.

3. Diploma in Social Work (Labour Welfare)—Calcutta University—one year.

4. The M. S. University, Baroda, has a two year course in social science leading to Master's Degree.

5. Institute of Industrial Administration at Management House, 8, Hill St., London W-1. holds examinations in Indian Centres, the passing of which leads to membership of the institute.

6. Madras School of Social Work, 58, Harrington Road, Chetpet—Duration 2 years. Qualifications for admission—Generally graduates with experience in social work.

7. Certificate in Social Service—Allahabad University.

8. The J. K. Institute of Sociology of Lucknow University has a two years course for graduates in Social Sciences preferably. The

first year course leads to a diploma in Social Sciences and Social Technique. The second year leads to Master's degree in Social Technique. On completing the full one year course the candidates will be given a Certificate of Proficiency in Labour Welfare.

SCOPE

UNESCO Field Organisations, The A. I. R. Publications Divisions; Employment Officers in Labour Exchanges; Labour Officers in Central Government, Ministry of Labour; Labour officers in the High Commissioners of India at Burma and other countries; Labour Officers in Provincial Government service; as Commissioners for schedule tribes and hill peoples; Family case workers; Factory Inspectors; Emergency Relief Organisers; Social Workers for Prohibition Departments; Probation and Parole Officers; Secretaries for Social Service Organisations; Superintendents for Prisons and Institutes for children, woman, beggars, the aged and the handicapped; Research Officers (Social Service Division) of Planning Commission; Harijan Welfare Officers; Medico-Social Worker for Development of training field in maternity and child welfare.

Special Social Education Organisers, Community Projects.

Documentary Films: of Government of India which are useful for the Sociology field giving information on India and her people are 'Ladakh Diary', 'Vale of Kashmir', 'Home of the Kodavas', 'Memories of Mewar', 'Our original Inhabitants', 'South Kanara', 'Himalayan Holiday', 'Himachal Pradesh', 'Verdent Isles', 'Land of the Camel', and 'Kulu—the happy Valley'.

Useful Book

"Directory of Social Services in the Madras State" published by Indian Conference on Social Work, "Philroy" Nungambakkam High Road, Madras-6.

9. The Indian Institute of Personnel Management

At 15, Port Street, Calcutta is the Professional Institution for those who are in the career of Personnel Managers and Labour Officers. They publish an useful journal in the field.

9·1 Scholarships

1. Lady Huggins Scholarship for Women, one year—at Bedford College for women, London.

2. Nuffield Foundation Travelling Followships for Training and experience in U. K.

10. Certificate in French and German

Lucknow University has two year courses in French and German. The successful completion of the course leads to the issue of certificate of proficiency in French and German.

11. Statistics

1: Short Applicational course of five months duration for benefit of research workers in agricultural, animal husbandry and other allied subjects is available at the Indian Council of Agricultural Research, Jamnagar House, New Delhi.

2. Regular Applicational Course of one year open for graduates in Maths., Economics, Agriculture and allied subjects is available at the Indian Council of Agricultural Research, New Delhi.

3. Diploma in Agricultural Statistics: minimum qualification for entry into this course at the Indian Council of Agricultural Research is any one of the following:—

1. Successful completion of one year applicational course.

2. M.A. or M.Sc., Statistics.

3. Graduates in Maths., with experience of statistics work for three years or who have been teaching statistics.

4. Six months training at the Statistical Training Institute, Bangalore.

12. Colliery Managers' Certificate of Competency

The examinations for the first and second class Colliery Managers' Certificates of Competency are generally held in January each year at the Dhanbad School of Mines. This is an useful qualification. To take these examinations it is necessary for the candidate to obtain first the first aid certificate of the St. Johns Ambulance Association or any other approved society. Afterwards he must have five years experience in coal mines or if he is a graduate in mining he must have three years experience. Applications must be made to the Chief Inspector of Mines, Dhanbad P.O. Manbhum Post.

13. Museum Technique

Summer courses in museum technique are conducted at the premises of the Madras Museum by the Superintendent in co-operation with the Director of Public Instruction of the Government of Madras for teachers. The duration is two to three months in Taxidermy (including stuffing, mounting and labelling) classification and arrangement of specimens.

13·1. List of Museums in India

Assam Provincial Museum, Gauhati.
Asutosh Museum of Indian Art, Calcutta University.
B.S. Parishad Museum, Calcutta.
Patna Museum, Patna.
Vaisali Museum, Vaisali.
Prince of Wales Museum, Bombay.
St. Xavier's College Museum, Bombay.
Bharat Ithihasa Sansodhak Mandal, Poona.
Victoria Jubilee Museum, Vijayawada.
Government Museum, Madras.
Government Museum, Pudukottai.
State Museum, Baripada.
State Museum, Bhubaneshwar.
State Museum, Mayurbhanj.
Central Government Archaeological Museum, Saranath.
Archaeological Museum, Mathura.
Provincial Museum, Lucknow.
Municipal Museum, Allahabad.
Bharat Kala Bhavan, Banaras.
Municipal Museum, Fyzabad.
Central Museum, Nagpur.
Raipur Museum, Raipur.
Gwalior Museum, Gwalior.
Indore Museum, Indore.
Dhar Museum, Dhar.
State Museum, Srinagar.
State Museum, Hyderabad.
National History Museum, Trivandram.
Art Museum, Trivandram.
Sri Chitralayam, Trivandram.
Museum of Antiquities—Padmanabhapuram.
Museum, Trichur.

B. S. Museum, Chamba.
The Central Museum, Bhopal.
The Site Museum, Fort Raisen, Raisen District.
Central Asian Antiquities Museum, New Delhi.
The National Museum, New Delhi.

Books recommended for reading in this field:—

1. The Museums of India by S. F. Mar Khan, M.A.
2. Museum—Its history, and tasks in Education by Wittlin.

Professional Society. The Museums Association, Chaucer House, London W.C. 1.

14. Chartered Accountants—C. A.

The Institute of Chartered Accountants of India, 98—102, Gurdwara Road Hutments, Talbotora Road, New Delhi conducts the examinations for accountancy.

A graduate other than B.Com. degree holder will have to undergo four years of training as articled clerk under a Fellow of the Institute or a registered accountant entitled to train articled clerks. After such training course he may appear for the final examination of the institute.

Auditing and Accounting qualification is essential in all Government services, business houses, railways and in the armed forces. There is a fair demand in this line for bright youngmen. Scope could be found in appointments such as Audit Officers in Government General Services.

15. Local self-government

The University of Allahabad has a one year post-graduate course in Local self government for graduates. The examination is both written, oral and has a practical training test.

The University of Nagpur has also a similar diploma course.

16. Professional Institutes—Chemistry

The following is a list of institutions connected with the professional aspects of Chemistry. The student may correspond with the particular institute in which he is interested:

The Royal Institute of Chemistry, 30, Russell Square, London.

The Chemical Society, Burlington House, Piccadilly, London.

The Society of Chemical Industry, 56, Victoria Street, London.

The Society of Public Analysts, 79, Ideal Lane, London.

The British Association of Chemists, 175, Piccadilly, London.

The Indian Chemical Society, 92, Upper Circular Road, Calcutta-9.

16·1. Professional Institute—Botany.

Botany graduates could obtain professional qualifications as well as have information facilities from the Indian Botanical Society, Royal Institute of Science, Mayo Road, Bombay.

17. Short service regular commissions in the Armed Forces for Civilian Doctors

Doctors in possession of medical qualification recognised by the Indian Medical Council are eligible to apply for Short Service Commission in the Armed Forces. The age limit is 45 but this is relaxable in case of specialists and released army personnel. After two years the candidates will be considered for regular commissions. Applications in prescribed forms must be sent to Director—General, Armed Forces Medical Service, Ministry of Defence, 'F' Block, New Delhi.

17.1. Direct Regular Commissions

Those doctors who are not above 28 years of age may apply for direct regular commissions.

18. Scholarships for overseas studies

The following handbooks may be consulted for scholarships:

1. Study Abroad published by UNESCO obtainable from Oxford Book and Stationary Company, Scindia House, New Delhi.

2. Inter-commonwealth Post—Graduate Scholarships in Science published by British Commonwealth of Nations Scientific Liason Offices, Africa House, Kingsway, London W.C. 2.

3. Publications of Government of India Education Department, Scholarships Division.

4. The year book of Universities of the Commonwealth, Publishers G.Bell & Sons., London.

5. For Loan scholarships candidates may apply to the Tata Education Trust, Bombay House, Bruce St., Bombay.

PRIVATE APPEARANCE TO UNIVERSITY EXAMINATIONS

University.	Class of Persons.	Exams. for which Exemptions are given.	General Conditions
1. Agra	(a) Teachers in Educational Institutions of the University area of affiliation.	All exams. except B.T., B. Sc. (Pharmacy) LL. B., M.B.B.S., B. Sc. Eng., B. V. Sc. and A.H.	Must be a Teacher of one year standing.
	(b) Inspectors of Departments of Education in the University area of affiliation.	do	Must be continuously serving one year.
	(c) Women residing within the Territorial limits of the University.	do	1. Two years interval from Inter to B.A. or B. Sc., or B. Com. 2. One year interval from B.A. B. Sc. or B. Com. or M.A. or M. Sc. or M. Com. Previous exams. 3. One year interval from M.A., M. Sc. or M.Com (Previous) to the final M.A., M. Sc., M. Com.

University.	Class of Persons.	Exams for which Exemptions are given.	General Conditions
2. Andhra.	1. Women.	Exams. involving non-sicence subject.	Two years residence in the University area.
	2. Pandits and Munshies, holding Oriental Title diplomas.	do	do
	3. Commercial Instructors with specified qualifications.	do	do
	4. Teachers.	do	do
	5. Employees in Govt. or other Public Services.	Matric., Inter., B.A.	Three years of approved service in the University area of affiliation from the date of passing the previous exam. The service area will not be insisted upon for those who have passed the previous exam. at the University.

	6. Employees in Scheduled Banks, Insurance Companies, Audit & Accounts Depts.	B. Com.	The service area will not be insisted upon for those who have passed the previous exam., at the University.
3. Nagpur.	1. Women.	All Examinations.	
	2. Teachers in the area of affiliation.	B.A., B. Sc., M.A., M. Sc.	12 Months Service in the area for B.A., B. Sc. 18 Months Service in the area for M.A., M. Sc. Also intervals of two years between the exams.
	3. Graduates.	M.A.	2 years after B. A. or B.Com. Candidates must offer the same subject for M.A. which they offered for B.A.

General Note:—For Science subjects the candidate must attend a full course of instruction in that subject at an affiliated College.

4. Annamalai.	Bonafide Teachers in the area of affiliation.	B.A., B. Sc., B.O.L., and Post-graduate courses in non-Science Subjects.	Five years teaching experience. Normal intervals.

University.	Class of Persons.	Exams for which Exemptions are given.	General Conditions
5. Travancore.	Bonafide Teachers in the area of affiliation.	B.A., B. Sc., M.A., M. Sc. (Maths.). (For Science subjects one year laboratory work in a College in the area is required)	Six years Teaching Experience.
6. Banaras.	(a) Women. (b) Bonafide Teachers. (c) Permanent Employees in the Banaras University, its Colleges and Library.	B.A. B. Sc., M.A., M. Sc. B.A. B. Sc., M.A., M. Sc. B.A. B. Sc., M.A., M. Sc.	Eighteen months Teaching experience. Normal intervals between exams.
7. Madras.	Bonfide Teachers.	Matric., Inter., B.A., B. Sc., M.A., Oriental Title, B. O. L., B. O. L. (Hons.). *Note*:—for Science subjects attendance at laboratory work in a College of the University is required.	3 years teaching experience. Normal intervals.
	Graduate Demonstrators	B. Sc. (Hons.).	2 years service in a 1st Grade or Hons. College in that subject. One year attendance sufficient.

8. Osmania.	(a) Teachers.	B.A.	3 years service.
	(b) Inspecting Officers (Edn. Dept.)	B.A.	3 years service.
	(c) Librarians of Colleges and at Asafia Library.	B.A.	3 years service.
	(d) Women.	B.A., M.A. in Arabic, Persian, Urdu.	
	(e) Lab. Assts.	B. Sc.	3 years service.
9. Punjab.	(a) Women.	University Exams. in faculties of Arts Science and Oriental learning.	
	(b) Teachers.	do	2 years service in all or 9 months continuous service.
	(c) Legal Practioners enrolled in courts within area of jurisdiction of University.	do	
	(d) Librarians and Library clerks of Libraries in the area.	do	One year service.
	(e) Inspectors of Schools in Punjab.	do	
	(f) Physical Instructors.	do	9 Months service.
	(g) Editors in the service of Punjab Advisory Board for Books.	do	One year service.
	(h) Members of Armed forces.	do	

University.	Class of Persons.	Exams for which Exemptions are given.	General Conditions
	(i) Punjab University servants or Govt. servants or Local Self-Govt. servants or those serving in affiliated Colleges.	University Exams. in faculties of Arts, Science and Oriental learning.	11 Months service.
	(j) Judicial Officers & Women.	for Law examinations.	
10. Jammu and Kashmir.	(a) Women.	Exams. in Arts, Science and Oriental learning.	6 Months Residence.
	(b) Teachers.	do	2 years aggregate service or 9 Months continuous service.
	(c) Demonstrators or Attendance Officers.	do	do
	(d) Legal Practioners of the State.	do	
	(e) Librarians or Library clerks.	do	One year service.
	(f) Physical Instructors.	do	9 Months service.
11. Lucknow.	Teachers.	B.A. (Pass). B.A. (General), M.A.	18 months teaching.

(For full particulars regarding exemption etc., candidates should address the respective Registrars or consult the Calendar).

STAGE III

CHAPTER—X

RESEARCH INSTITUTES

1. **Bhandarkar Oriental Research Institute, Poona 4:** offers facilities for research work, in oriental languages and manuscripts. At present it is co-operating with Poona University as a constituent institution for post-graduate research in Sanskrit and Prakrit languages and Ancient Indian culture.

2. **Bose Research Institute,** (93-1, Upper Circular Road, Calcutta) conducts research in Physics, Chemistry, Applied Chemistry, Plant Physiology, Cytogenetics and Plant Breeding and Micro-biology.

3. **Forest Research Institutes at Dehra Dun,** (New Forest, U.P.) has research facilities for problems connected wirh forestry and also serves as a source of information on the subject on Wood Technology, Wood working, Timber mechanics, Seasoning, Preservation, Cellulose, Paper, and Chemistry.

4. **Harcourt Butler Technological Institute, Kanpur,** Researeh facilities in chemistry (Plastics) and Oil Technology are available at this institution.

5. **Indian Agricultural Research Institute,** (Jamnagar House, New Delhi). This institute has facilities for research and has laboratories, museum, herbia and an up-to-date scientific library. The Institute's research deals generally with problems of all India importance. The substations include :—Agricultural (Kurnool), Sugar-breeding (Coimbatore), Botanical (Pusa), Potato and Wheat (Simla), Tobacco (Guntur).

6. **Indian Institute of Philosophy,** (East Khan desh, Amalner.) Research is carried on at this institute on Indian Philosophy, Logic, Ethics and Metaphysics.

7. **Indian Institute of Science, Bangalore 3.** The laboratories of the institute provide facilities for research in Physics, Chemistry, Inorganic Chemistry, Physical Chemistry, Organic Chemistry, Chemical Engineering, Fermentation Technology, Cytogenetics, Electrical Technology, Power, Communication, Aeronautical and Internal Combustion Engineering and Metallurgy.

8. **The Central Building Research Institute, Roorkee U.P.** is an advanced research institution for research on materials for building and new standards for better building.

9. **The Central Drug-Research Institute,** (Chattar Manzil Palace, Lucknow:) This has facilities for promotion of Drug research including Botanical, Pharmacognostical, Chemical, Pharmaceutical, Bacteriological, Microbiological and Clinical. It has the functions of testing and standardising drugs. It offers facilities and help to scientists in Universities and special institutions to carry out investigations on these subjects.

10. **Electro-Chemical Research Institute at Karaikudi,** has the functions of doing research on Electro-chemistry.

11. **Central Food Technological Research Institute, Mysore,** has facilities for both fundamental and technological research on the subject of food, food treatment, new sources of food vitamins, food industries, food sanitation and food information.

12. **Central Glass and Ceramics Research Institute,** (P. O. Jadavpur College, Calcutta,) has facilities for fundamental research on glass, ceramics; its functions are:—testing, standardising, technical assistance to the industry, information and training of technologists.

13. **Central Leather Research Institute,** (Guindy, Madras,) has facilities for basic and fundamental research, applied research, and development research.

14. **Central Road Research Institute, New Delhi** has facilities for research on problems connected with construction and maintenance of roads, soils, road safety, and development of rural vehicles.

15. **National Chemical Laboratory,** (Ganeshkind, Poona) has facilities for investigations in Organic Chemistry, Physical Chemistry, Chemistry of high polymars, Organic Chemistry, Bio-chemistry and Chemical Engineering; Departments are:—Bio-chemistry, Inorganic Chemistry, Survey and Information, Chemical Engineering and Organic Chemistry.

16. **National Fuel Research Institute,** (Digwadia, Dhanbad,) has general and coal survey laboratories and facilities for research in gas-research, coal peliography, coal preparation and X-ray control.

17. **National Metallurgical Laboratory, Jamshedpur.** This works in co-operation with Tata Iron and Steel Company research laboratories at Jamshedpur and has facilities for research on

problems of metallurgy. This building is located next to Tata's Institute of Technology, Jamshedpur. Departments are:— Metallurgy, Ore Pressing, Mineral Beneficiation, Chemistry.

18. **National Physical Laboratory of India,** (Hillside Road, New Delhi). The functions of this institute are (a) fundamental research (b) standards in quality, performance and practice (c) investigations on raw meterials for industries (d) testing standards and publications. Its researches would be on fundamentals, applied physics, and fundamental scientific research. Departments are:—Sound, Weights and Measures, Applied Mechanics, Industrial Physics, Optics and Electricity.

19. **King Institute of Preventive Medicine,** (Guindy, Madras.) Research is an important function of this institute and among the subjects on which special research has been undertaken are:— Cholera, Typhoid, Plague, Leprosy, Diphtheria, Malaria, Filariasis, Virus diseases and subjects relating to water supply. This institute is recognised for M.Sc. and Ph.D. degree in Bacteriology and allied subjects of the Madras University.

20. **The Indian Dairy Science Association** (at Indian Dairy Research Institute, Hosur Road, Bangalore-1,) has the objective of advancement of dairy science in all aspects. It publishes the journal "Indian Journal of Dairy Science". Membership of the association is open to persons in teaching, research and advisory staff in an educational or research institution or persons in industry having good technical knowledge of the fields of dairying. The class of membership will be :—Benefactors, Life-Members, Ordinary members and Student members.

For Drugs and Pharmacy the following are the research institutes :—

21. **Central Drugs Laboratory,** (110, Chitranjan Avenue, Calcutta-12.)

22. **Pharmacognosy Laboratory,** (1, Sudder St., Calcutta-16.) Departments in this institute are:—Pharmacology, Bio-chemistry, Pharmacognosy, Bacteriology.

23. **Drug Research Laboratory,** (Jammu Tawi:) Departments include: Pharmacology, Botany and Chemistry.

24. **Central Drugs Research Institute,** Chattar Manzil Palace, Lucknow.

25. **Pasteur Institutes** dealing with medical research :—
(i) Patna (ii) Shillong (iii) Coonoor.

26. **Malarial Institute of India,** 22 Alipore Road, Delhi, has facilities for research on control of malaria and allied problems.

27. **Indian Council of Medical Research,** Hutments, Block No, E/36 (Civil Block) behind South Block, Central Secretariat, New Delhi, has research laboratories for post-graduate medical research.

28. **Nutrition Research Laboratories,** Coonoor, is an institute of research on nutrition problems.

29. **The Indian Institute of Medical Research,** 27, Prinsep Street, Calcutta-13.

30. **The Tata Memorial Hospital,** Hospital Avenue, Parel, Bombay-12, has facilities for post-graduate research including research on cancer.

31. **The School of Tropical Medicine,** Chittranjan Avenue, Calcutta, has the following departments :—Pharmacology, Tropical Medicine, Protozoology, Pathology, Bacteriology, Entomology, Chemistry, Clinical Pathology, Leprosy, Bowel Diseases, Kala-azar, Dermatology, Mycology, Helminthology, Hæmatology, Diabetes and Filariasis.

32. **All-India Institute of Hygiene and Public Health,** 110, Chittranjan Avenue, Calcutta-12. has the following departments : Public Health Administration, Epidemiology, Microbiology, Biochemistry, Physiological Hygiene, Nutrition, Sanitary Engineering, Statistics, Maternity and Child Welfare.

33. **Haffkine Institute,** Parel, Bombay-12. has the following Departments for Research :—Vaccines, anti-toxins and Sera, Pharmacology, Chemotheraphy, Nutrition and experimental Pathology Clinical Pathology, Virous Diseases including Rabbies.

34. **The Indian Central Jute Committee Technological Research Laboratories,** Regent Street, Tollygunge, Calcutta-33, has Departments for experimental Spinning, Physics and Chemistry research work.

35. **Indian Central Cotton Committee Technological Institute,** (Matunga, Bombay) has Fibre Technology Section and Microscopy Section.

36. **Central Sericultural Research Station,** (Berhampore P. O. Murshidabad District, West Bengal,) has Laboratories for Research in Sericulture.

37. **Central Tobacco Research Institute, Rajahmundry,** and the **Cigarette Tobacco Research Station, Guntur** are the two institutions of research in this field.

38. **Agricultural Research Institutes** are :—

I. Agricultural College and Research Institute, Lawley Road, P. O., Coimbatore.

II. Allahabad Agricultural Institute, Allahabad.

III. Fruit Research Institute, Bihar Sabowr, P.O., Bhagalpur.

IV. Central Coconut Research Station, Kayankulam, Travancore.

39. **Veterinary Research Institution at Izatnagar,** (Bareilly, U. P.) has facilities for research on Cattle diseases and allied problems.

40. **Indian Institute of Sugar Technology, Kanpur,** for Sugar Research.

41. **Central Rice Research Institute, Cuttack** has Departments as follows for research : Botany, Mycology, Agronomy, Entomology, Chemistry and Farm Division.

42. **Indian Lac Research Laboratory,** (Namkum, Ranchi, Bihar.) has an Entomology Laboratory for research work.

43. **Forest Research Laboratory,** (Malleswaram, Bangalore,) has a Forest Chemistry and Forest Utilisation office.

44. **The Institute of Science,** (Mayo Road, Fort, Bombay-1) has the following research departments :—Physics, Organic Chemistry, Botany, Zoology and Biochemistry.

45. **The Central Research Institute, Trivandrum** has Marine Biology, Fisheries, Applied Chemistry, Mineral Survey and Research, Statistics, and Public Health Laboratory.

46. **The Central Water Power-Irrigation and Navigation Research Station, Poona** has facilities for research on these subjects.

47. **Research in Irrigation :—**

(a) Poona Irrigation Research Division, Poona.

(b) Irrigation Research Circle, P. W. D., U.P. Irrigation Branch Roorkee.

(c) Irrigation Research Institute, Amritsar, Punjab.

(d) Irrigation Research Division, Poondi, S India.

(e) River Research Institute, West Bengal, Anderson House, Alipore, Calcutta.

48. **Tata Institute of Fundamental Research,** Appollo Pier Road, Bombay-1.

49. **The Hyderabad Engineering Research Laboratories,** (Red Hills, Hyderabad.) has facilities for Engineering Research.

50. **Bombay University Department of Chemical Technology,** (University of Bombay, Matunga, Bombay-19.) has the following departments :—

Textile Chemistry.

Chemical Engineering.

Food Technology.

Plastics, Paints and Varnishes, Intermediates and Dyes.

Oils, Fats and Waxes.

Pharmaceuticals and fine chemicals.

Fuel Technology.

51. **The College of Mining and Metallurgy, Banaras Hindu University, Banaras** has Research facilities in the departments of Metallurgy, Mining, and Fuel Technology.

52. **The Jamshedpur Technical Institute, The Tata Iron and Steel Co.** has research facilities in Engineering Studies.

53. **The Kalabhavan Technical Institute, Baroda.** has the following departments :—Mechanical Engineering, Civil Engineering, Electrical Engineering, Chemical Technology, Weaving Technology, Architecture, Painting.

54. **The Mathematical Instrument Office,** (15, Wood St., Calcutta-26,) is for facilities to do research on Mathemetical Instruments.

55. **The Indian Tea Association,** (Toklai Experimental Station, Cinnanara P. O., Assam,) is for facilities for research on Tea Plants.

56. **The Indian Association for Cultivation of Science,** (229, Bowbazar St., Calcutta-12.) has departments of X-Ray Optics and Physical Chemistry.

57. **Indian Statistical Institute Statistical Laboratory,** (Presidency College, Calcutta.) has facilities for Statistical Research.

58. **Birbai Institute of Paleobotany,** (53, University Road, Lucknow,) is a research institute on that subject.

59. **The Bengal Immunity Research Institute,** (39, Upper Circular Road, Calcutta-16,) is a research institute on that subject.

60. **The University of Calcutta** has the following research laboratories:—Botany, Zoology, Anthropology, Geography, Statistics, Geology, Applied Physics, Chemistry, Applied Chemistry, Psychology, Applied Mathematics, Physiology, Agriculture.

61. **Institute of Nuclear Physics,** (92, Upper Circular Road, Calcutta,) has facilities for advanced research in this subject.

62. **The Institute of Radio Physics and Electronics,** (92, Upper Circular Road, Calcutta,) has facilities in this subject for research.

63. **Government Fisheries Research Station, Calicut:** The Fisheries technological station is located in Calicut proper, very near the other Government institutes like the Kerala Polytechnic, the Kerala Soap Institute, Government Shark Liver Oil factories, etc. This station is under the Madras Government Fisheries Department and is in charge of superintendent. There are three sections in this viz., Bio-chemical, Bacteriological and Thermo-chemical. The main object and aim of the station is to conduct researches on the best methods of preservation of fish, utilisation of fish wastes and by-products and nutritional investigations on fish. The following are some of the problems that are being tackled. Fish spoilage studies, Isolation of Trinethylamine Oxide in fishes, fat variation study in fish during different months; Chilling, and refrigeration of fish, salting of fish and semidrying of prawn, Bacteriological studies on fresh, salted and decomposing fishes; also the study of food values of different

fishes: routine control analysis of fishery by-products like fishmeals, fish manures and fish oils.

64. **Shri Ram Institute of Industrial Research**—(19, University Road, Civil Lines, New Delhi.)—Research on Industrial problems (heavy chemicals, Textiles, fats, oils, plastics and organic chemistry).

65. **Solar Physics Observatory—Kodaikanal,** Facilities for research in Astronomy and Astro Physics—There are also 2 scholarships of value Rs. 100 p.m.

66. **Kuppuswami Sastri Research Institute,** (Mylapore, Madras) facilities for research in Sanskrit and Philosophy.

67. **Agricultural Research Station, Anakapalle.** The sugarcane Research Station, Anakapalli was started in the year 1913 with the object of evolving improved strains of paddy and millets and improved methods of cultivation for the South Visakapatnam area. Sugarcane is an important commercial crop in this area and considerable attention has been devoted to this crop. The Research Station consists of 103·50 acres out of which 76·50 acres of land are cultivated while the rest is occupied by buildings and roads. The Farm is irrigated by a channel from the River Sharada and by wells. The Farm soils are of various types ranging from sandy to clayey loam.

The average rainfall of the Station for the past thirty five years is 37·39 inches in 55 rain days.

In the year 1947, intensive research on Sugarcane was started under the aegis of the Indian Central Sugarcane Committee and problems relating to varieties, culture, manuring and plant protection are being tackled.

The work under progress consists of use and popularisation of labour saving efficient implements like victory plough, ridge plough and junior hoe. Every year new varieties of sugarcane received from the Indian Sugarcane Breeding Institute, Coimbatore are studied and after thorough testing they are released for further trials at the regional Liaison Farms. Various experiments on the problems relating to the manuring of cane, water requirements, nitrogen nutrition performance of varieties under water logging, cheap and

efficient methods of propping cane, and plant protection are under progress.

The results of research from this central station are translated into the ryots, fields by special development staff working in thirteen districts of this state, under the control of this research station.

Varietal and manurial trials in paddy and miscellaneous trials on a number of other crops are under progress. In the orchard, propagation of fruit plants are distributed to the public. White leghora birds, eggs and chicks are supplied to the public for rearing.

Preservation of cattle manure under cover in impervious pits and composting of the crop wastes with different starters are other important items of work attended to besides raising of green manure plants like Glyricedia maculata and Sesbania Speciosa.

68. **Sugarcane Research Station, Gudiyattam.** The Research Station is situated in the North Arcot District and was started in the year 1935 with a view to solve the problems of sugarcane cultivation in the central districts.

The soils are light loams tending to be sandy. The total area of the farm is 34·68 acres of which 28·42 acres are under cultivation, the rest being occupied by buildings, roads and channels. Irrigation is mostly from wells except during the period where there is flow of water from the tank. The soils are well drained.

The average annual rainfall is 34·37 inches in 68 rainy days.

Sugarcane Research is the most important item of work on the station, besides use and popularisation of improved implements like iron ploughs, ridge plough and junior hoe and yield trials on paddy.

In sugarcane, varieties are tested every year and promising ones released for further trial in the regional liasion farms. Experiments regarding manuring, time of planting and harvest and water requirements have been under progress.

Conservation of cattle manure by proper methods and preparation of composts are also done at this research station besides growing of green manure plants like Glyricedia maculata and Sesbania Speciosa.

69. Dairy Research: The Dairy Research Institute, Bangalore, takes graduates with M.Sc. or B.Sc. (Honours) degrees for research work in the following departments:

1. Dairy Chemistry, 2. Dairy Bacteriology, 3. Dairy Technology and 4. Dairy Husbandry.

70. The Indian Institute of Technology, Kharagpur, has facilities for research in the following departments:—Mathematics, Electrical Engineering (Communications) Mechanical Engineering, Applied Chemistry, Physics, Chemical Engineering.

71. Chemical Testing and Analytical Laboratory (Washermanpet, Madras) for general testing and analysis of minerals and raw materials of industries and of finished products and on problems entrusted to it by Government Departments, private firms and individuals.

72. Oil Technological Institute, Anantapur, Research on problems bearing on Oil Technology.

73. Kerala Soap Institute, Kozhikode, Research on problems of soap and allied products.

74. Government Oil Factory, Kozhikode, Research on oils like Shark Liver Oil and allied subjects.

75. The Veterinary Biological and Research Institute, Ranipet, is a research centre for Biological products for protecting livestock against contagious diseases.

76. The Central Rice Research Institute, Cuttack, has facilities for research in this field.

Documentary Film of Government of India in the field of research is " Research Aids Industry ".

STAGE III

CHAPTER—XI

BRIEF NOTES ON FURTHER STUDIES IN U.K. AND U.S.A.

Guidance to Students Desiring Information on Advanced Study in the United States of America

A few preliminary points of information may be of assistance to those who desire to proceed to the United States of America for study in an institution of higher learning. Compliance with these preliminary steps will assist representatives of the U. S. Government in this country in supplying accurate information and guidance.

1. Sources of Information

Inasmuch as it may not be possible for all prospective students to come to the American Embassy in Delhi or visit one of our Consulates-General, located in Bombay, Calcutta or Madras, an endeavour is being made to provide information concerning study in the United States in each of the Indian Universities as well as certain other centres and institutions. Many of the Indian Universities are operating information bureaus at the present time and some of these are conducted under the guidance of staff members in the Universities who have themselves had experience in the United States either as students or instructors.

In addition to the University information bureaux, the scholarships section of the Ministry of Education of the Government of India in New Delhi is in a position to give assistance and guidance to prospective students.

If the prospective student is resident in Delhi, Calcutta, Bombay or Madras, a visit to the Information Library of the Embassy or Consulates General of the United States, will be of interest and value. In these libraries there will be found many of the University catalogs that can be perused, basic reference works on American education and skilled library and research workers who can assist students in gaining the information they require. The Cultural Officers at the United States Information Services will also advise students on scholarships and admission to U.S. colleges and universities.

2. Basic Qualifications

Advanced study in an American university requires that you should have the following basic qualifications:

(1) You should have a B.A. degree or its equivalent in some comparable field. This, in general, means four years study beyond

matriculation or Senior Cambridge. Experience has pointed out that it is highly advisable for prospective students to pursue their studies to this level in India before attempting to go to the United States. Because of the overcrowded conditions of American universities and the large number of applications for admission from foreign students, an Indian student holding a first class M.A. degree or a B.A. Honours degree, has a much better chance of securing admission than students who hold only Bachelors' Pass degrees. Also compared with other countries, it is very expensive to study in the United States. All prospective students are advised to pursue their studies in India to the fullest possible extent and not enter courses in the United States which are available in India.

(2) Before actual acceptance can be arranged in an American University a certificate of proficiency in English will be required. Students who have attained the academic standards indicated under paragraph (1) will easily qualify in this respect, but a certificate is required, signed by the Head of the English Department or some other responsible individual in the institution, stating that the candidate's English is adequate to enable him to pursue his higher studies in the United States.

3. Finances

The United States immigration regulations require every foreign student to declare or show proof that he has adequate funds to meet all his expenses in America. Higher education for the foreign student is, as stated above, very expensive and if you intend proceeding there at your own expense, you should be in possession of from Rs. 7,500 to 10,000 for every year of study in the States. *This amount is exclusive of travel costs both ways.* You will also require in addition approximately Rs. 1,500 a year to cover incidental expenses. The fees, of course, vary from university to university. You should also make provision for expenses in connection with your visa, health insurance, etc. Under the Government of India's revised scale of dollar exchange permissible to private students undergoing training in the U.S., the private student will now receive an exchange permit for $ 160.00 only per mensem plus the actual amount of college fees and will not be entitled to the allowance of $ 400.00 per annum which he has been so for receiving for books, clothing, etc.

4. Part-time Work

In view of immigration regulations, as well as the burden of academic work, the chances that a student can earn even a part of his total expenses are very slight. Prospective students are therefore warned not to count on any part-time work while pursuing regular courses of study. Also it is not advisable for foreign students to plan to earn even a fraction of their expenses, inasmuch as adjusting to a new environment and meeting required standards of scholarship are a full time job.

5. Duration of Courses

Since American universities evaluate a student's work towards any advanced degree in terms of academic hours, number of credits, and content of courses etc., the time necessary for securing a degree will depend on the scholastic ability of the individual student as well as his educational background and can be determined only after consultation with the faculty advisor of the university. But for general guidance, an American university usually requires four academic years of study for a Bachelor's degree after matriculation, one to two years beyond the Bachelor's degree for the Master's degree, and an additional two year's study after the Master's degree for a Doctorate. A thesis in connection with studies leading to both M.A. and doctorate degrees is usually required.

6. Preparing for Departure

When a student is admitted to an American institution, he is notified by a letter from the institution. He must then secure a pass port issued by the Home Department of his State. Upon receipt of the letter of admission the student should apply to the Controller of Exchange, Reserve Bank, for a dollar exchange permit, presenting to the Reserve Bank a copy of the letter of admission. He should then apply in person to the nearest American Consulate for a student visa, bringing with him (1) his passport (2) the dollar exchange permit (3) the original letter of admission to the university of his choice, and (4) three regulation photographs (2½ by 2½ inches on thin paper, taken against a light background.)

7. Lodging

There are several types of accommodation for students. (1) college dormitory (student hostel under the supervision of college authorities), (2) students' cooperative boarding house, (3) boarding house,

(4) room in the house of a private family, and (5) private apartment. Application for residence in the dormitory should be made through the university or college registrar's office. All other lodging must b arranged by the student. The cost of room and board, as well as tuition and incidentals, depends to a great extent upon one's choice of a college and its location. You should write directly to the university concerned for specific details.

8. Trainees

The selection of Indians for technical training in the United States in such fields as Agriculture, Labour, Public Health and Transportation, is at present in the hands of the Government of India and all inquiries concerning these possibilities should be directed to the Government of India, Ministry of Education (Scholarships Branch), New Delhi.

9. Scholarships

(1) *General Information and Institute of International Education :* There are very few free scholarships offered by institutions and organizations in the United States, and when they are available they are usually offered through the Institute of International Education in New York. This organization serves as a clearing house in relation to information about scholarship assistance. A communication from this organization states: ".... the overcrowded condition of American colleges and universities requires limitations of students from abroad.....However, graduate students with outstanding academic records and high recommendations from the heads of their college or other competent educationists, will be considered." If an individual wishes to apply to the Institute, he should communicate with the United States Educational Foundation in India, 17 Curzon Road, New Delhi, or the United States Information Service, American Consulate General in Bombay, Madras or Calcutta, whichever office is nearest to his place or residence. He should write indicating that he has (a) the basic qualifications as outlined in Section 2 above and (b) to what extent he has financial support. In response a preliminary application form will be forwarded to him for completion. Selected applicants may be requested to call at their own expense, at the United States Educational Foundation in India or the United States Information Service offices for an interview in connection with their applications for scholarships. The applicant may not specify a choice of institution. He should not apply

direct to the Institute. Competition for such scholarships will normally be held in India each year in September and October only.

Students are not limited to these channels if they have specific indication of scholarship assistance from a particular American institution, an organization with suitable connections, or individuals of responsibility. While such arrangements are exceptional, certain religious bodies and organizations like Rotary International do work outside of the Institute of International Education and the United States Government.

(2) *Fulbright Travel Grants* : Students to whom awards are made by the Institute of International Education are also eligible for travel grants to the United States and return to India under the provisions of the agreement with the Government of India for financing certain Educational Exchange Programs authorized by the Fulbright Act. Fulbright travel grants are awarded on a competitive basis.

Applications for Fulbright travel grants may also be made by students who have independently secured admission to an institution of higher learning in the United States. These students should have a certificate of acceptance for study issued by the institution in the United States beginning from September. Upon presentation or receipt of this evidence of admission the United States Educational Foundation in New Delhi or the United States Information Service office will issue Fulbright application forms. These forms must be completed and submitted by March 31st of the year in which the student expects to travel to the United States.

(3) *Smith-Mundt Scholarships:* Under Public Law 402, a limited number of scholarships are available to Indian nationals desirous of pursuing advanced studies in the United States. These grants, on a whole or partial basis, provide for tuition, maintenance and incidental expenditure incurred in connection with studies. They are made on a competitive basis and the Smith-Mundt program of awards is operated in Conjunction with the Fulbright and the Institute of International Education programs mentioned in paragraphs (1) and (2) above. The competition is held normally in September and October only of each year.

NOTES FOR THE GUIDANCE OF INDIAN STUDENTS WISHING TO VISIT THE UNITED KINGDOM FOR FURTHER STUDIES

(Issued by the British Council)

Indian students wishing to attend British educational institutions should submit their applications for admission through :—

The Secretary to the Government of India,
Ministry of Education,
New Delhi.

or

through the University Bureaux

Suitable applications will be forwarded by the Ministry of Education to :—

The Education Department,
Office of the Indian High Commissioner in the U.K.,
India House,
Aldwych,
London W.C. 2.,

which will in turn apply, on behalf of the students, to appropriate British educational institutions.

The British Council cannot recommend students to the Principals of colleges, or assist in placing them in colleges or universities in any way.

Passports should be obtained *either* from :—

The Ministry of External Affairs,
Passport Department,
Government of India,
New Delhi.

or

the provincial Secretariats
e.g. West Bengal Secretariat, Writers' Buildings, Calcutta 1.

No visas are required by Indian Nationals for entry into the United Kingdom.

Travel Arrangements.—Students are advised to make their travel arrangements as far in advance as possible through a reputable Travel Agency.

Accommodation.—The Welfare Officer of the Indian High Commission, at the address given, offers assitance to students in finding suitable accommodation in London. Students wishing to attend universities and colleges outside London should ask the Registrars or Principals for advice concerning accommodation. In many cases universities and colleges have Halls of Residence for students.

Costs.—At a rough estimate, the yearly cost of studying at such universities as Oxford, Cambridge and London, is from £400–£450 (Rs. 5,333–6,000). These figures cover board and lodging, fees and incidental expenses such as clothes and books. Similar figures for the provincial universities are from £325–£375 (Rs. 4,333–5,000) a year. These are approximate figures only.

Each applicant should enquire of the Registrar of the university, or the Principal of the college, in which he is interested, for further details concerning qualifications for admission, courses, fees and prospectuses, but actual applications for admission *must* be made through the Ministry of Education, Government of India or University Bureaux.

Since vacancies in British universities and colleges are limited, applications for admission should be made through the Ministry of Education, Government of India, as far as possible in advance of the date when the students wish to begin their studies. It is suggested that preliminary enquiries be made a year in advance of the student's proposed date of joining the college or university. The academic year normally commences in October.

ADVICE TO INDIAN STUDENTS WISHING TO OBTAIN PRACTICAL TRAINING WITH BRITISH FIRMS.

Indian students who require practical training with firms in the United Kingdom should make enquiries and applications to :—

(*a*) The Secretary, Ministry of Commerce and Industry, Government of India, New Delhi, if the applicant is already employed in industry.

(*b*) The Secretary, Ministry of Education, Government of India, New Delhi, if the applicant is still a student not yet employed.

Students will usually find that while they are studying at a University in the United Kingdom there is insufficient time or opportunity for them to take up part-time work to help them to defray their

expenses, except possibly for one or two months during the summer vacation. They may, however, be able to do so for longer periods while taking certain courses at technical colleges. Enquiries on this subject should be made to :—

The Education Branch,
Office of the High Commissioner for India,
India House,
Aldwych,
London, W.C. 2.

Neither the United Kingdom High Commission nor the British Council can give assistance to applicants who wish to be attached to industrial organizations in the United Kingdom or to obtain part-time work during their course of studies.

THE UNIVERSITIES OF THE UNITED KINGDOM

ABERDEEN	...	The Secretary, The University, Aberdeen, Scotland.
BELFAST	...	The Registrar, The Queen's University, Belfast, N. Ireland.
BIRMINGHAM	...	The Registrar, The University, Edgbaston, Birmingham 15.
BRISTOL	...	The Registrar, The University, Bristol 8.
CAMBRIDGE	...	The Registrar, Registry of the University, Cambridge.
CARDIFF	...	The Registrar, The University of Wales, University Registry, Cathays Park, Cardiff.
DURHAM	...	The Registrar, The University, 46 North Bailey, Durham.
EDINBURGH	...	The Secretary, The University, Edinburgh, Scotland.
EXETER	...	The Registrar, University College of the South-West of England, Exeter, Devon.
GLASGOW	...	The Registrar, The University, Glasgow, Scotland.
HULL	...	The Registrar, University College, Hull.
LEEDS	...	The Registrar, The University, Leeds 2.
LEICESTER	...	The Registrar, University College, Leicester.
LIVERPOOL	...	The Registrar, The University, Liverpool 3.

LONDON ...	The Academic Registrar, University of London, London W.C.1.
MANCHESTER ...	The Registrar, The University, Manchester 13.
NOTTINGHAM ...	The Registrar, The University, Nottingham.
OXFORD ...	The Registrar, University Registry, Oxford.
READING ...	The Registrar, The University, Reading.
SHEFFIELD ...	The Registrar, The University, Sheffield 10.
SOUTHAMPTON ...	The Registrar, University College, Southampton.
ST. ANDREWS ...	The Secretary, The University, St. Andrews, Scotland.
STOKE-ON-TRENT	The Registrar, University College of North Staffordshire, Keele, Stoke-on-Trent.

NOTES FOR THE GUIDANCE OF INDIAN STUDENTS WISHING TO STUDY CIVIL, ELECTRICAL, MECHANICAL ENGINEERING IN THE UNITED KINGDOM

(Issued by the British Council)

Degrees in Engineering (B.A., B.Sc. (Eng.), B.Sc. Tech., B. Eng., B.A.I., B.E.) are granted by all universities except Reading. The course normally extends over three or four years. In most cases the courses for all engineering students are identical during the first and sometimes the second year of the course, but students have an opportunity of specializing in Civil, Electrical or Mechanical Engineering in the later stages of the curriculum. At most of the English universities diplomas or certificates may be awarded to students not qualified for matriculation who attend courses of study extending over three or four years. Facilities for advanced study and research are provided by most universities.

Degrees in Dock & Harbour Engineering are granted by Liverpool University, and in Production Engineering by the Universities of Birmingham and Glasgow.

Courses for the Higher National Certificate in Production Engineering are available in some Technical Colleges and, in a few, more advanced training may be had.

The approximate cost of tuition for university courses in Engineering vary from about £76 for a three-year course at the universities of Northern Ireland and Wales, to about £192 at the English universities for a three or four year course.

Instruction in Radio Engineering and Technology is provided by most universities in their departments of Physics and/or Electrical Engineering.

The University College of Southampton prepares students for external degrees in Engineering of London University. In addition, it provides other Engineering courses leading to diploma and other awards, for suitable entrants who need not necessarily have matriculated. The Polytechnics mentioned below also provide courses in preparation for external degrees of London University.

There are courses, generally from two to four years' duration at many Technical Colleges in various parts of the country. There are facilities for advanced study and research at some colleges. Courses are provided at the Polytechnics and the South-East London Technical College mentioned below, in preparation for the National Certificates in Electrical and Mechanical Engineering, and also for the City and Guilds of London Institute Certificates. The following short list, which is far from exhaustive, will indicate the range of fees for engineering courses in Technical Colleges.

BIRMINGHAM	...	Central Technical College, 3 years. Fee: £15 1s. per year.
CARDIFF	...	Technical College, 2 years or 3 years. Fee: £18 per year.
EDINBURGH	...	Heriot-Watt College, 3 years. Fee £27 per year.
GLASGOW	...	Royal Technical College, 3-4 years. Fee: £26 5*s*. to £29 18*s*, 6*d*. per year.
LONDON	...	Battersea Polytechnic, 4 years. Fee: £20 per year.
		Northampton Polytechnic, 4 years, Fee, £20 per year.
		The Polytechnic, Regent Street, 3 or 4 years: Fee: £22 1*s*. per year.
		Woolwich Polytechnic, 3 or 4 years. Fee; £20 per year.

South-East London Technical College, 2 or 4 years. Fee: £7 10*s*. per year.

Westminster Technical College, 2 years. Fee: £15 per year.

LOUGHBOROUGH ... Loughborough College, 3–5 years. Fee: £75 per year. Fees for residence vary from £40 to £50 per term (£120 to £150 per year). Vacation charges are £4 4*s*. per week.

LIST OF PRINCIPAL POLYTECHNICS, COLLEGES OF COMMERCE AND TECHNICAL COLLEGES IN THE UNITED KINGDOM

(Issued by the British Council)

BARNSLEY ... Mining and Technical College, Barnsley, Yorkshire.

BELFAST ... College of Technology, Belfast. Northern Ireland.

BIRMINGHAM ... Birmingham Central Technical College, Suffolk Street, Birmingham.

City of Birmingham Commercial College, Suffolk Street, Birmingham.

BRADFORD ... Bradford Technical College, Great Horton Road, Bradford, Yorkshire.

CAMBORNE ... School of Metalliferous Mining, Camborne, Cornwall.

CARDIFF ... Cardiff Technical College, Cathays Park, Cardiff, Wales.

DUNDEE ... Dundee Technical College, Bell Street, Dundee, Scotland.

EDINBURGH ... Heriot-Watt College, Chambers Street, Edinburgh, Scotland.

Royal(Dick) Veterinary College, Edinburgh 9, Scotland.

GLASGOW ... Glasgow Veterinary College, Buccleuch Street, Glasgow C.3, Scotland.

Royal Technical College, George Street, Glasgow C.I,

West of Scotland Agricultural College, 6 Blythswood Square, Glasgow C. 2.

LONDON ... Battersea Polytechnic, Battersea Park Road London S. W. 11.

Chelsea Polytechnic, Manresa Road, London S. W. 3.

Catford College of Commerce, Plassy Road School, Rushey Green, London S. E. 6.

City of London College, Moorgate, London E. C. 2.

College of Aeronautical Engineering, 72 Prince's Way, London S. W. 15.

Froebel Education Institute, Grove House, Roehampton Lane, London S. W. 15

The Warden, Goldsmith's College, New Cross, London S. E. 14.

Northampton Polytechnic, St. John Street, London E. C. 1.

Northern Polytechnic, Holloway Road, London N. 7.

North-Western Polytechnic, Prince of Wales Road, Kentish Town, London N. W. 5.

The Polytechnic, Regent Street, London W. 1.

Royal Veterinary College, Royal College Street, London N. W. 1.

Sir John Cass Technical Institute, Jewry Street, Aldgate, London E. C. 3.

South-East London Technical College, Lewisham Way, London S. E. 4.

Woolwich Polytechnic, Wellington Street, Woolwich, London S. E. 18.

Westminster Technical College, Vincent Square, London S. W. 1.

LOUGHBOROUGH Loughborough College, Loughbrough, Leicestershire.

WIGAN ... Wigan and District Mining and Technical College, Wigan, Lancashire.

Educational Chart of Colleges, for Courses in Arts, Science and Commerce of the Madras University.

B.A.—Part II

Colleges.	Arabic.	French.	German	Hindi.	Kannada.	Latin.	Malayalam.	Persian.	Sanskrit.	Tamil.	Telugu.	Urdu.
‡ Govt. Arts College, Madras.	√						√	√		√	√	√
†† Loyola College, Madras.		√		√	√		√		√	√	√	√
Pachaiyappa's College, Madras.									√	√	√	
* Presidency College, Madras.				√	√		√		√	√	√	√
Vivekananda College, Madras.									√	√	√	
† Queen Mary's College, Madras.		√		√			√		√	√	√	√
Women's Christian College, Madras.				√	√		√		√	√	√	√
‡‡ Ethiraj College for Women, Madras.				√			√			√	√	√
Stella Maris College, Madras.		√		√			√			√		
Govt. Arts College, Anantapur.				√	√				√		√	√

† Also Early South Indian History
†† Also Latin
* Also Psychology
‡ Also Sanskrit & Telugu
‡‡ Also Tamil

Part III

Arabic.	Botany.	Chemistry.	Economics.	French.	Geography.	History.	Islamic History.	Kannada.	Malayalam.	Mathematics.	Military Science	Music.	Philosophy.	Physics.	Politics.	Statistics.	Tamil.	Urdu.	Zoology.
√			√			√	√										√	√	
										DM									
		√ M	√ M S	√		√ M S				√ ²AS St				√ M S					
			√ M S			√ M S				√ AS St			√						
			√ M S			√ M S													
			√			√				√									
			√ M S		√	√ M S						√					√		
										M									
	√ M S		√ S			√ M				√ AS PG			√	√ S					√ M S
			√ M			√ S													
			√ M			√ S													
			√ M			√ S				√ St AS									

B. A. Part II—*(contd.)*

Colleges.	Arabic.	French.	German.	Hindi.	Kannada.	Latin.	Malayalam.	Persian.	Sanskrit.	Tamil.	Telugu.	Urdu.
Govt. College, Chittoor. (Cochin)				√			√		√	√		
Govt. College, Coimbatore.									√	√		
* Maharaja's College, Ernakulam.	√			√			√		√			
St. Albert's College, Ernakulam.				√			√		√			
St. Theresa's College, Ernakulam.		√		√			√		√			
Farook College, Feroke.	√			√			√			√		√
Dr. Alagappa Chettiar College, Karaikudi.				√					√	√		
Govt. College, Kumbakonam.									√	√		
Osmania College, Kurnool.								√			√	√
Besant Theosophical College, Madanapalle.					√					√	√	

* Malayalam is taken with Sanskrit.

Part III—(*contd.*)

Arabic.	Botany.	Chemistry.	Economics.	French.	Geography.	History.	Islamic History.	Kannada.	Malayalam.	Mathematics.	Military Sc.	Music.	Philosophy.	Physics.	Politics.	Statistics	Tamil.	Urdu.	Zoology.
			√ M S			√ M S				√			√						
	√		√ S		√					√									√
			√ M			√ S			√	√ As St									
	√ M		√ M S			√ S M				√									√ S
			√ M S			√ S M				√ M				√ S					
√			√ M S			√ S M	√			√	√			√ S		√			
			√ M			√ S				√						√			
			√ M			√ S				√							√		
			√ M			√ S	√												
			√ M			√ S													

B.A.—Part II—*(contd.)*

Colleges.	Arabic.	French.	German.	Hindi.	Kannada.	Latin.	Malayalam.	Persian.	Sanskrit.	Tamil.	Telugu.	Urdu.
American College, Madura.				√			√		√	√		√
Madura College, Madura.				√					√	√		
Govt. College, Mangalore.				√	√		√		√			
St. Agnes College, Mangalore.		√			√		√		√			
St. Aloysius College, Mangalore.		√		√	√		√		√			
† Sarah Tucker College, Palamcottah.										√		
St Xavier's College, Palamcottah.				√			√		√	√		
Govt. Victoria College, Palghat.				√			√		√	√		
H. H. Raja's College, Pudukottai.									√	√		
Salem College, Salem.									√	√		√
Madras Christian College, Tambaram.		√		√	√		√		√	√	√	

† Tamil Group includes Early S. Indian History.

Part III—*(contd.)*

Arabic.	Botany.	Chemistry.	Economics.	French.	Geography.	History.	Islamic History.	Kannada.	Malayalam.	Mathematics.	Military Sc.	Music.	Philosophy.	Physics.	Politics.	Statistics.	Tamil.	Urdu.	Zoology.
										[1]MS									
	√		√			√				√						√			√
	S		M			S				[2]ST									M
			S			M				AS									
			√			√				√									
			M			S				M				S					
										S									
			√			√				√				√					
			M			S								S					
			√			√				√									
			M			S				AS									
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			M			S				AS									
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			M			S				AS									
										ST									
			√			√				√									
			M			S				AS									
										PG									
		√	√			√			√	√				√					
			M			M				AS									
			S			S				PG									
			√			√				√									
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			√			√				√				√					
			M			S				AS				S					
										PG									
			√			√				√									
			M			S				AS									
			S			M				PG									

B. A. Part II—*(contd.)*

Colleges.	Arabic.	French.	German.	Hindi.	Kannada.	Latin.	Malayalam.	Persian.	Sanskrit.	Tamil.	Telugu.	Urdu.
Govt. Brennen College, Tellicherry.	√			√			√		√			
†Sacred Heart College, Thevara.				√			√		√			
M. D. T. Hindu College, Tinnevelly.									√	√		
Sree Venketeswara College, Tirupathi.				√					√	√	√	
Holy Cross College, Trichinopoly.		√		√			√		√	√		
National College, Trichinopoly.				√					√	√		√
St. Joseph's College, Trichinopoly.		√		√		√	√		√	√		
‡ Sri Kerala Varma College, Trichur.				√			√		√			
St. Mary's College, Trichur.				√			√		√			
St. Thomas College, Trichur.				√			√		√			
Islamiah College, Vaniyambadi.										√		√
Senthikumara Nadar College, Virudunagar.										√		

† Also Syriac.
‡ Also Sanskrit.

Part III *(contd.)*

Arabic.	Botany.	Chemistry.	Economics.	French.	Geography.	History.	Islamic History.	Kannada.	Malayalam.	Mathematics.	Military Science	Music.	Philosophy.	Physics.	Politics.	Statistics.	Tamil.	Urdu.	Zoology.
			√ M			√ S				√									
			√ M			√ S				√ AS PG									
			√ M S			√ S M				√ AS PG					√				
		√ S M	√ M S			√ S M				√ AS PG			√	√ M					√ S
	√ M	√ S	√ M			√ S				√ M				√ S					
			√ M S			√ S M				√ AS ST	√		√						
	√ M	√ M S	√ M S			√ S M				√ M S			√ M		√				
			√ M			√ S			√	√		√				√			
			√ M			√ S				√									
			√ M			√ S				√ AS PG									
			√ M			√ S													
			√ M			√ S				√ ST PG									

B. A. Part II—*(contd.)*

Colleges.	Arabic.	French.	German	Hindi.	Kannada.	Latin.	Malayalam.	Persian.	Sanskrit.	Tamil.	Telugu.	Urdu.
Govt. Arts College, Cuddapah.				√							√	√
Lady Doak College, Mathurai.				√						√		
Thiagarajar College, Mathurai.									√	√		
St. John's College, Palamcottah.							√			√		
Raja Doraisingam Memorial College, Sivaganga.				√					√	√		
Jamal Mahammed College, Trichy.	√			√						√		√
St. Mary's College, Tuticorin.										√		

Part III—(*contd.*)

Arabic.	Botany.	Chemistry.	Economics.	French.	Geography.	History.	Islamic History.	Kannada.	Malayalam.	Mathematics.	Military Science	Music.	Philosophy.	Physics.	Politics.	Statistics.	Tamil.	Urdu.	Zoology.
			√ M			√ S													
			√							√									√
			√ M			√ S				√						√			
			√ M			√ S				√									
			√ M			√ S													
			√				√								√				
			√ M			√ S				√									

B. Sc. Parts I & II

Colleges	English.	Malayalam.	Sanskrit.	Tamil.	Telugu.	Kannada.	Botany.	Chemistry.	Geology.	Home Science.	Mathematics.	Physiology.	Physics.	Statistics.	Zoology.
† Govt. Arts College, Madras.	√	√		√	√		√ S	√ M S			√ M S		√ M S		
Loyola College, Madras.	√						√ M S	√ M S			√ S		√ M S		
Pachaiyappa's College, Madras.	√						√ M S	√ M S			√ S		√ M S		√ M S
Presidency College, Madras.	√		√	√	√		√ M S	√ M S			√ M S		√ M S		
Vivekananda College, Madras.	√						√ M S	√ M S	√ M		√ S		√ M S		√ S
Queen Mary's College, Madras.	√							√ M S	√ M S	√	√ M S		√ M S		
Women's Christian College, Madras.	√									√					
Govt. Arts College, Anantapur.	√				√			√ M S			√ S		√ M S		√ S
Dr. Alagappa Chettiar College, Karaikudi.	√						√ M S	√ M S	√ M S		√ M S		√ M S		√ M S
Govt. College, Kumbakonam.	√							√ M S			√ M S		√ M S		

† Also Urdu.

B. Sc. Parts I & II—*(contd.)*

Colleges	English.	Malayalam.	Sanskrit.	Tamil.	Telugu.	Kannada.	Botany.	Chemistry.	Geology.	Home Science.	Mathematics.	Physiology.	Physics.	Statistics.	Zoology.
American College, Madura.	√						√ S	√ M S			√ M S		√ M S		√ S
Madura College, Madura.	√							√ S			√ M S		√ M S		
St. Aloysius College, Mangalore.	√							√ M S			√ S		√ M S		
* Govt. Victoria College, Palghat.	√						√ M S	√ M S			√ S		√ M S		√ M S
Madras Christian College, Tambaram.	√					√	√ M S	√ M S			√ M S	√ S	√ M S		√ M S
Sacred Heart College, Thevara.	√							√ M			√ S		√ S		
St. Joseph's College, Tiruchirapalli.	√						√ S	√ M S			√ S		√ M S		
Venketeswara College, Tirupathi.	√						√ S	√ M S			√ S		√ M S	√ S	
St. Thomas College, Trichur.	√							√ S			√ S		√ M		

* Also Electrical Eng. Subsidiary.

B. Com.

Colleges	French.	Hindi.	Malayalam.	Tamil.	Telugu.	Urdu.	Co-operation.	Insurance	Transport.
* Loyola College, Madras.	√	√	√	√	√		√		
† Pachaiyappa's College, Madras.	√	√					√		√
Vivekananda College, Madras.		√		√	√			√	
Govt. College, Coimbatore.		√					√		
Dr. Alagapppa Chettiar College, Karaikudi.		√		√				√	
Osmania College, Kurnool.		√			√	√	√		
American College, Madura.		√					√		
Madura College, Madura.		√		√					√
Govt. College, Mangalore.		√					√		
St. Aloysius College, Mangalore.	√	√						√	
Sacred Heart College, Thevara.		√	√						√
St. Joseph's College, Trichy.		√		√			√		
Kerala Varma College, Trichur.		√	√						√
Islamiah College, Vaniyambadi.				√		√	√		√
‡ Farook College, Feroke.		√	√	√		√			
Raja's College, Pudukottai.		√					√		
Sri Venkateswara College, Tirupathi.		√		√	√		√		

* Also Honours course Sp. Subject Accountancy and Auditing.
† Also Honours course Sp. Subject Co-operation.
‡ Sp. Subject Statitical Methods.

B.A. (Honours)

Colleges	Arabic Language & Literature.	Dravidian Language & Literature.	Tamil.	Telugu.	Malayalam.	Kannada.	Economics.	English Language & Literature.	Geography.	Hindi Language & Literature.	History.	Islamic History.	Mathematics.	Philosophy.	Politics.	Sanskrit Language & Literature.	Urdu Language & Literature.	Statistics.	Psychology.
Loyola College, Madras.							√						√						
Pachaiyappa's College, Madras.			√	√			√				√		√	√					
Presidency College, Madras.							√	√	√		√		√		√	√			√
Vivekananda College, Madras.							√						√						
Madras Christian College, Tambaram.							√	√			√		√	√					√
St. Joseph's College, Trichy.							√						√						

B. Sc. (Honours)

Colleges	Botany.	Chemistry.	Geography.	Geology.	Mathematics.	Physics.	Zoology
* Presidency College, Madras.	√ M S	√ M S		√ M S	√ S	√ M S	√ M S
Loyola College, Madras.		√ M				√ S	
Queen Mary's College, Madras.			√ M			√ S	
Vivekananda College, Madras.			√ M			√ S	
Maharaja's College, Eranakulam.		√ M				√ S	
Madras Christian College, Tambaram.	√ S				√ S	√ M	√ M
St. Joseph's College, Trichy.		√ S			√ S	√ M	

* Also Statistics Honours Course.

B. O. L. Courses.

	PASS	HONOURS
Pachaiyappa's College, Madras		Tamil, Telegu.
Loyola College, Madras	Tamil.	
Govt. Arts College, Coimbatore	Tamil.	
Farook College, Feroke	Arabic.	
Osmania College, Kurnool	Arabic, Persian, Urdu.	
Keraia Varma College, Trichur	Sanskrit, Malayalam.	

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